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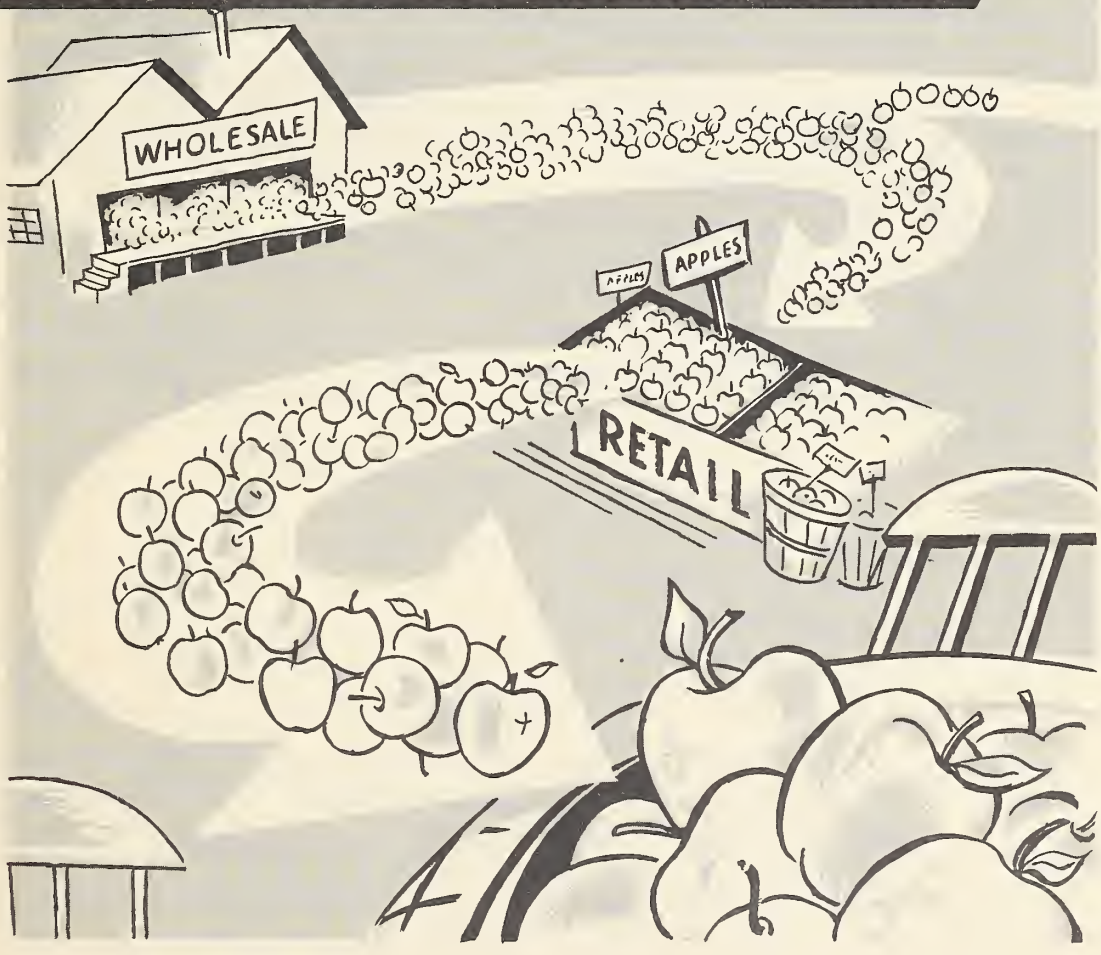
FEBRUARY 1956

WEEKLY CHANGES IN MOVEMENT OF APPLES

Selected Markets, 1955-56 Marketing Season through Dec. 31, 1955



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
WASHINGTON 25, D. C.

AMS - 91

PREFACE

This is the first report to be issued during the 1955-56 marketing season summarizing data on changes in the weekly movement of apples at retail in Philadelphia and wholesale in Philadelphia, Atlanta, Chicago and Los Angeles. Tables 2 through 20 were developed from reports issued weekly and from information not previously reported. Some revisions of weekly wholesale movement data have been made which were not indicated in prior weekly reports. Tables in this publication include a complete set of figures to replace prior weekly reports issued by leased wire through the Market News Service and from Washington, D. C., in the form of dittoed tables. Further up-to-date information on wholesale movement and retail store observations may be obtained by using the weekly reports issued subsequent to weeks covered in this summary.

The methods followed in collecting the data and description of procedure for sampling retail stores are given in the third section of this report.

This report contains information on retail store movement measured by weekly store audits, not previously reported and not contained in the current weekly releases. It also contains information obtained by observation on total sales for the 60 stores included in the sample for the one-hour observation period in each store each week. The customer count is also included. This breakdown is not carried in the current weekly reports of sales per 100 customers.

No attempt has been made to interpret the differences in results obtained by the approaches used in this project. It is expected that a report will be issued at a later date giving an appraisal of these approaches.

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WEEKLY CHANGES IN THE MOVEMENT OF APPLES SELECTED MARKETS, 1955-56 MARKETING SEASON THROUGH DECEMBER 31, 1955 1/

INTRODUCTION

Weekly reports on changes in the rate of movement of apples through marketing channels are intended to assist in providing producers, shippers, and other handlers of this commodity with a current picture of the market situation. This movement information, released weekly by the Agricultural Marketing Service through its Market News offices, is to assist the industry in making day-to-day marketing decisions as to when and where their crop should be marketed to realize the best results from changing demand.

Current knowledge as to changes in the movement rate of a product through the marketing channel would be helpful in preventing excess supplies in some markets while the product is scarce in other markets. This marketing condition sometimes results in extensive fluctuations of the price of the product, which may in turn have an adverse effect on returns to the producers.

The trade needs information not only on total movement of apples but also on movement by variety. Effective demand may vary greatly between varieties, depending on the specific end-use for which apples are purchased. Delicious, including double red strains but excluding Goldens, is the leading variety produced in the United States. Other varieties in order of importance include Winesap, McIntosh, and Jonathan (table 1).

In this series of weekly reports, only those apples sold in fresh form are included. Approximately 61 percent of the 1953-54 apple crop, or 66,505,000 bushels, were marketed in fresh form. The rest were utilized on the farm and in processed form. 2/

1/ This report was prepared for publication by William S. Hoofnagle, Hugh M. Smith, L. Don McMullin, and Violet D. Grubbs, Market Development Branch, Agricultural Marketing Service. The retail store information is based on data collected by Audits and Surveys Company, under contract with the U. S. Department of Agriculture. The wholesale market information was collected by the Department through a joint undertaking of the Market News Service, Fruit and Vegetable Division, and the Market Development Branch, Marketing Research Division. The study on which this report is based was conducted under authority of the Agricultural Marketing Act of 1946.

2/ U. S. Agricultural Marketing Service. Fruits (Noncitrus) Production, Farm Disposition, Value, and Utilization of Sales, 1953 and 1954. 37 pp. July 1955.

Table 1.--Apples: Relative importance by variety produced, average 1944-53

Varieties	Percentage of total production
Summer varieties:	
Gravenstein	3
Other summer	3
Fall varieties:	
Grimes Golden	2
Jonathan	7
Wealthy	2
Other fall	2
Winter varieties:	
Baldwin	3
Ben Davis and Gano	2
Black Twig (Paragon)	1
Cortland	2
Delicious	21
Golden Delicious	3
McIntosh	9
Northern Spy	2
R. I. Greening	2
Rome Beauty	6
Stayman	4
Winesap	11
Yellow Newtown (Albemarle Pippin)	4
York Imperial	5
Other winter	6
Annual average of production 106,402,000 bu.	100

Computed from data in: U. S. Agr. Mktg. Service. Apples--Production by Varieties, 1955, with Comparisons. 9 pp. December 1955.

CUMULATIVE DATA ON THE WEEK-TO-WEEK CHANGES IN THE MOVEMENT OF APPLES

In comparing changes in the week-to-week movement of all apples in the Philadelphia market, the month of October was used as a base (October 1955 average = 100) so that changes as indicated by the retail observation approach, the retail audit approach, and the wholesale approach could be placed on a relative basis for comparative purposes. Changes in the movement by each approach beginning the week of October 8 reflect somewhat the same general trend. Noticeable exceptions do exist, however (figs. 1 and 2, tables 2 and 3). The reporting periods covered by the three approaches are not identical; however, the results from each are intended to reflect sales during a week ending Saturday. The wholesale data represent movement to all outlets (page 33); whereas the sample of retail stores covers only sales made through the larger stores (page 29).

A noticeable divergence in the trends between retail and wholesale movement occurred during the week including November 11, and the following week. Because Friday, November 11, was a legal holiday, the collection of wholesale data was made 1 day earlier. This resulted in covering only 6 days, whereas in the following week a period of 8 days was included in the report which may account for the divergence in the movement trends between retail and wholesale.

Reporting week-to-week changes by the retail observation and audit approaches has revealed that there have been marked changes in sales by variety and area of origin; for example, sales of eastern Delicious have been declining in the Philadelphia market since October, whereas sales of western Delicious have been trending upward. Western Winesaps are not normally found in eastern retail outlets at the beginning of the marketing season, but increase considerably in volume later on (figs. 3 and 4, tables 4 and 5).

The number of retail stores in the whole sample carrying a given variety is indicated along with the area of origin of the apples (tables 6 and 7). This information provides a check on the reasonableness of the data pertaining to observed sales per 100 customers--that is, customers passing the apple display--for that variety as measured through the observation approach. Similar information on number of stores carrying particular varieties is useful also in checking the movement data as measured by store audits.

Three series of prices for apples, by variety and area of origin, are collected by the observation approach on Thursday, Friday, or Saturday: (1) Most frequent, (2) highest, and (3) lowest. This information gives an indication of the range in prices during the periods of observation (table 8). Since this is current information, it provides data upon which the producer can bargain more effectively in marketing his particular variety of apples. Through the audit approach, a weighted spot price per pound is obtained for apples on sale on Monday, Tuesday, or Wednesday, whichever day the audit is made (table 9).

Prices of closely competing fresh fruits are also obtained in the observation approach (table 10). The purpose in obtaining these data is to indicate a price factor which may in part be responsible for the changes in the movement of apples.

The condition of apples in both retail approaches is reported percentagewise as good, fair, or poor (tables 11 and 12). This supplementary information indicates to the growers and shippers some idea of how well their apples are standing up in the marketing channel by the time they are offered to consumers. Furthermore, this type of information is of help to the retailers in providing them with some indication of a factor that may affect movement of the product in the retail outlet. Since these data are reported for each of the more important varieties, they provide a comparative basis for

determining the extent to which the different varieties maintain their quality over the marketing season.

In the observation approach, the percentages of apples sold in bulk and in package by variety and area of origin are obtained (fig. 5, table 13). Also recorded is the number of stores carrying apples in bulk, in package, or in a combination of package and bulk (table 14). These data may be used from the merchandising standpoint in indicating the effectiveness of different types of practices employed by retailers in offering the commodity to consumers. This information yields some clue to retailers as to the extent of packaging carried out for the different varieties of apples in the Philadelphia market.

Weather conditions are reported during the period in which sales of apples are observed in the stores (table 15). Data on weather help explain some of the changes that occur from week to week in sales of this commodity. During periods of inclement weather, consumers might be inclined to purchase in smaller quantities or to refrain from purchasing because of problems involved in transporting from outlet to home.

The third approach, that is, measurement of changes in the movement of apples that occur at the wholesale level, has been reported beginning with the week ended September 24, 1955. The wholesale approach indicates sharp changes in the movement from week to week in the 4 markets (fig. 6, table 16). The difference in changes between markets may be accounted for in part by the particular characteristics inherent in each market. According to wholesale data, the level of inventories of apples in Atlanta, Chicago, and Los Angeles exhibited an initial upward trend followed by fluctuations from week to week (fig. 7, table 17). Storage facilities are much larger in Chicago and Los Angeles than in the Atlanta and Philadelphia markets.

For each of these markets a complete picture has been developed which indicates inventory, arrivals less diversions 3/, and the calculated disappearance by weeks (figs. 8 through 11, tables 18 through 21).

Inventory holdings in a market fluctuate with variations in arrivals into the market and disappearance from wholesale.

3/ Diversions include all outshipments from a market. Usually this involves further routing of loaded rail cars on track.

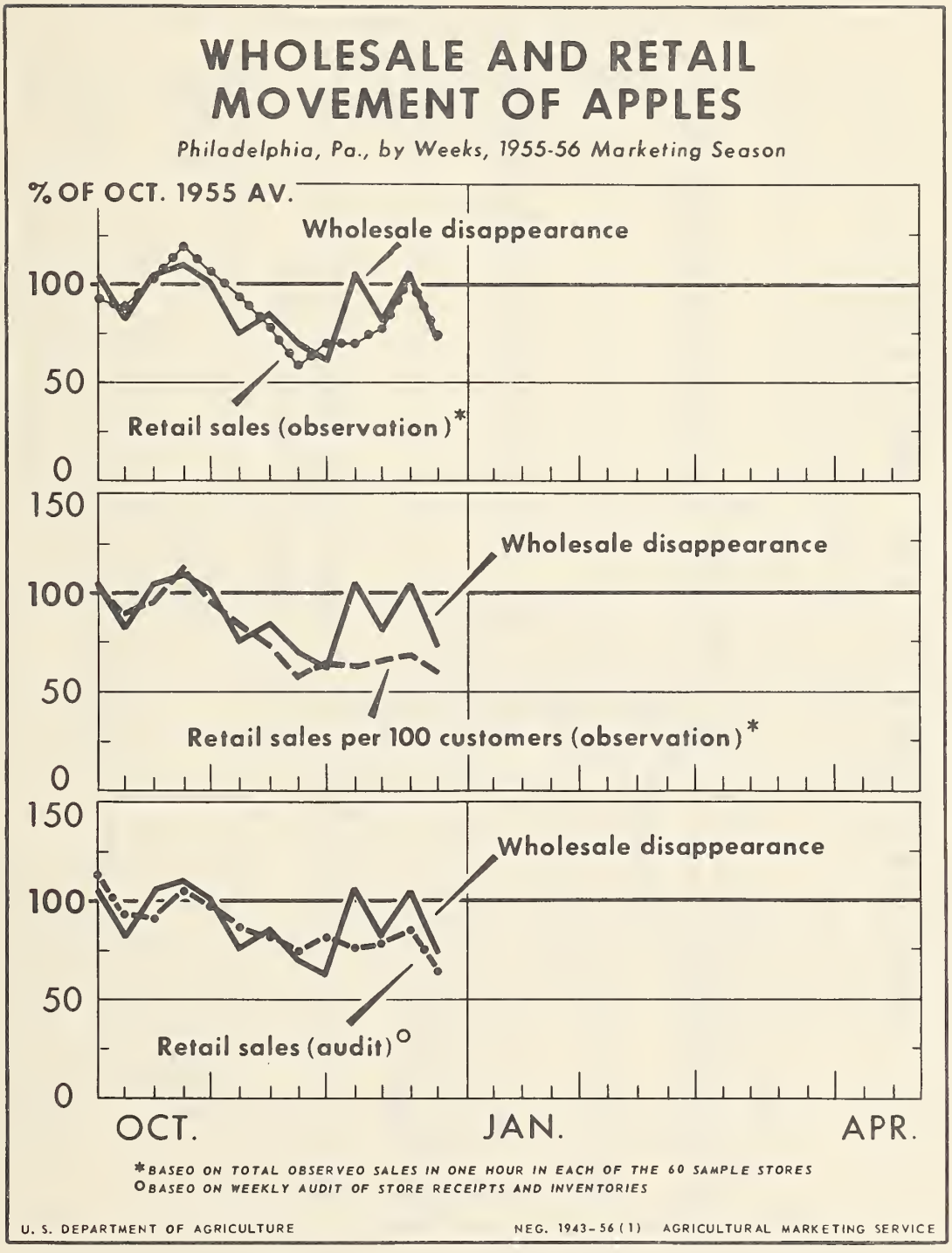
WHOLESALE AND RETAIL MOVEMENT OF APPLES
Philadelphia, Pa., by Weeks, 1955-56 Marketing Season
% OF OCT. 1955 AV.
Wholesale disappearance
Retail sales (observation)*
Wholesale disappearance
Retail sales per 100 customers (observation)*
Wholesale disappearance
Retail sales (audit)°
100
50
0
150
OCT.
JAN.
APR.
*BASED ON TOTAL OBSERVED SALES IN ONE HOUR IN EACH OF THE 60 SAMPLE STORES
°BASED ON WEEKLY AUDIT OF STORE RECEIPTS AND INVENTORIES
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Figure 1

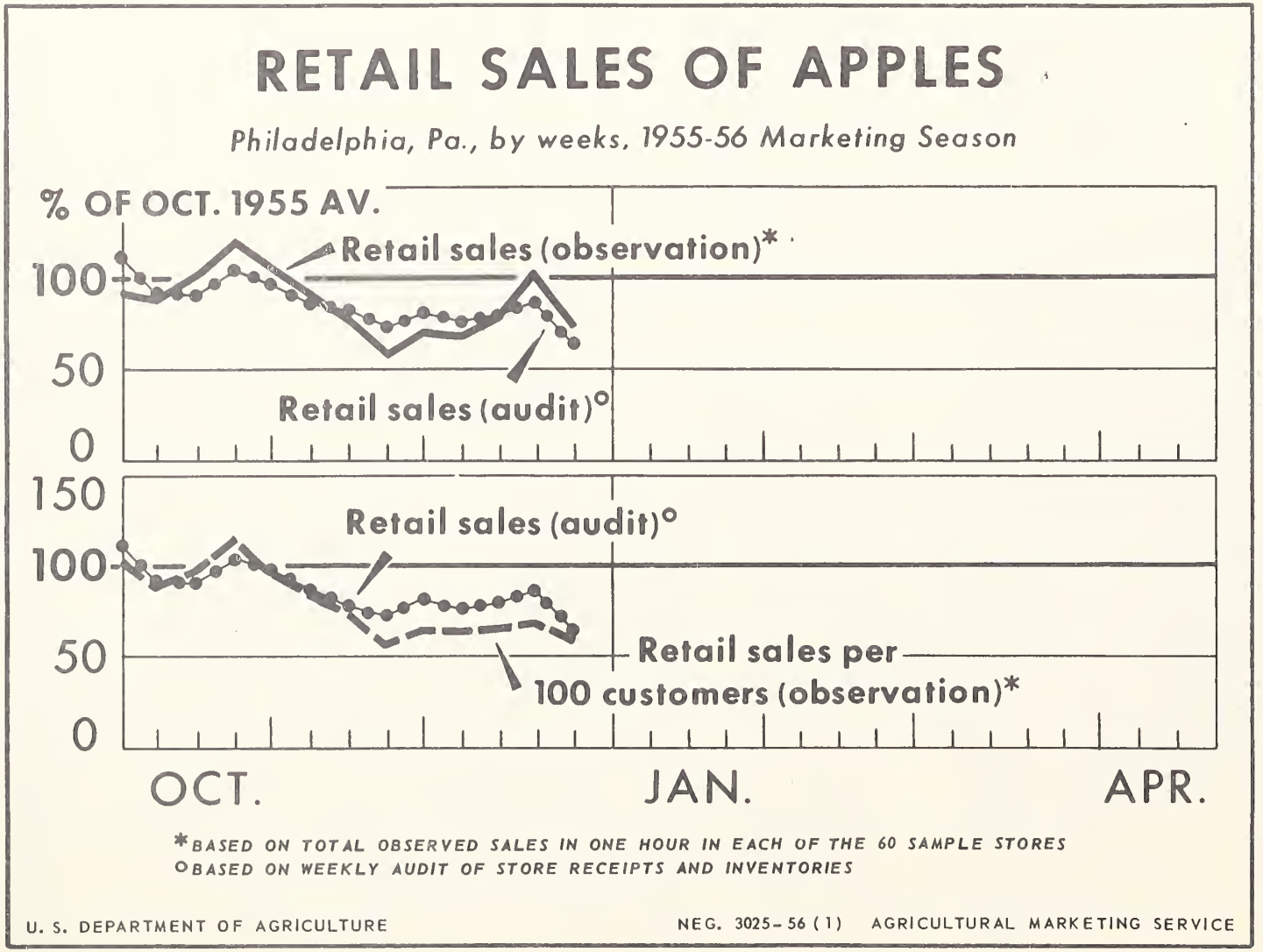
RETAIL SALES OF APPLES
Philadelphia, Pa., by weeks, 1955-56 Marketing Season
% OF OCT. 1955 AV.
Retail sales (observation)*
100
50
Retail sales (audit)°
0
150
Retail sales (audit)°
100
50
Retail sales per
100 customers (observation)*
0
OCT.
JAN.
APR.
*BASED ON TOTAL OBSERVED SALES IN ONE HOUR IN EACH OF THE 60 SAMPLE STORES
°BASED ON WEEKLY AUDIT OF STORE RECEIPTS AND INVENTORIES
U. S. DEPARTMENT OF AGRICULTURE
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Figure 2

Table 2.--Apples: Index numbers of movement, by specified approaches, Philadelphia, Pa., by weeks, 1955 season to date

(October 1955 Av. = 100)

Period ending 1/	Retail sales measured by--			Disappearance from wholesale
	Observation, 1 hour		Audit, 1 week	
	Total	Per 100 customers		
Oct. 8	91.4	102.3	112.4	104.2
Oct. 15	87.8	88.4	92.2	81.8
Oct. 22	101.8	96.2	90.8	104.6
Oct. 29	119.0	113.4	104.8	109.3
Nov. 5	106.6	96.0	97.5	101.4
Nov. 12	93.2	84.6	85.5	75.4
Nov. 19	78.4	72.3	82.4	84.2
Nov. 26	58.4	56.2	73.2	68.7
Dec. 3	69.9	63.7	81.5	61.6
Dec. 10	68.9	63.5	76.5	105.0
Dec. 17	77.7	65.0	78.5	81.8
Dec. 24	103.7	67.5	85.6	104.8
Dec. 31	73.4	59.7	64.2	72.5

1/ These data are intended to reflect sales during a week ending Saturday.

Table 3.--Apples: Weekly retail sales and disappearance from wholesale level, Philadelphia, Pa., 1955-56 marketing season to date 1/

Period ending 2/	Retail sales measured by--				Disappearance from wholesale
	Observation, 1 hour			Audit, 1 week	
	Quantity	Customers passing display	Sales per 100 customers		
	Pounds	Number	Pounds	1000 pounds	1000 bushels
Sept. 24	-	-	-	-	57.4
Oct. 1	-	-	-	-	54.4
Oct. 8	1,569	3,865	40.6	137.3	52.6
Oct. 15	1,508	4,303	35.1	112.7	41.3
Oct. 22	1,748	4,582	38.2	110.9	52.8
Oct. 29	2,044	4,546	45.0	128.1	55.2
Nov. 5	1,830	4,805	38.1	119.1	51.2
Nov. 12	1,600	4,755	33.6	104.5	38.1
Nov. 19	1,347	4,691	28.7	100.7	42.5
Nov. 26	1,003	4,497	22.3	89.5	34.7
Dec. 3	1,201	4,756	25.3	99.6	31.1
Dec. 10	1,184	4,698	25.2	93.5	53.0
Dec. 17	1,334	5,177	25.8	95.9	41.3
Dec. 24	1,781	6,649	26.8	104.6	52.9
Dec. 31	1,260	5,316	23.7	78.4	36.6

1/ Observation and audit made in 60 self-service food stores in the Philadelphia metropolitan area, each with 2 or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ These data are intended to reflect sales during a week ending Saturday.

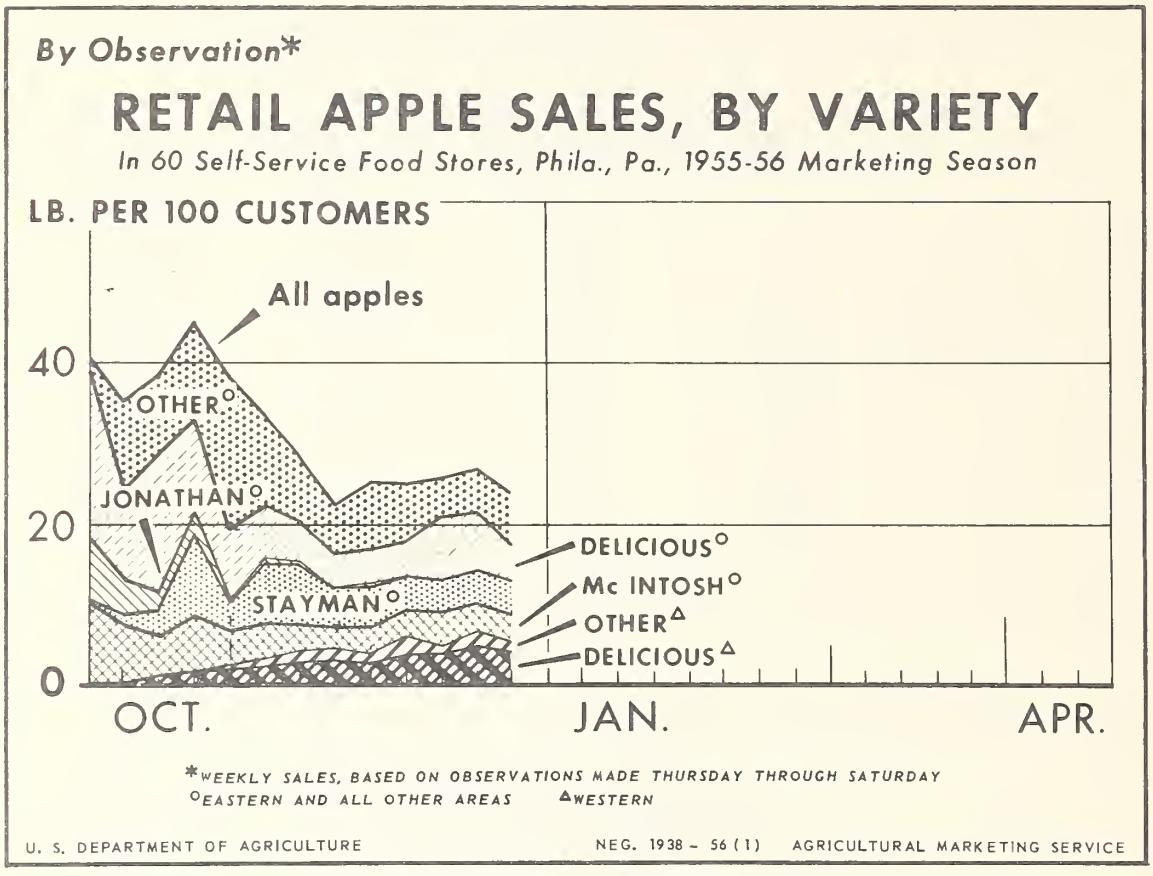

Figure 3

Table 4.--Apples: Quantity sold per 100 customers, Philadelphia, Pa., 1955-56 marketing season to date 1/

Period covered	Origin and variety								All varieties
	Western area			Eastern and all other areas					
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties	
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Oct. 6-8	0.2	-	0	10.1	0.3	7.6	20.8	1.6	40.6
Oct. 13-15	.3	-	0	7.0	1.2	4.7	11.0	10.9	35.1
Oct. 20-22	1.2	-	2/	5.0	3.1	2.5	17.0	9.4	38.2
Oct. 27-29	1.9	-	0.1	6.7	10.0	2.9	11.3	12.1	45.0
Nov. 3-5	2.0	-	.3	4.4	3.9	0.2	8.8	18.5	38.1
Nov. 10-12	2.2	-	1.1	4.3	7.5	.8	6.7	11.0	33.6
Nov. 17-19	2.9	-	1.5	3.1	7.6	.2	4.8	8.6	28.7
Nov. 25-26 3/	3.0	-	1.5	2.6	5.2	0	4.3	5.7	22.3
Dec. 1-3	2.7	-	1.2	3.2	5.2	.1	4.8	8.1	25.3
Dec. 8-10	3.8	-	2.3	3.5	4.2	-	4.4	7.0	25.2
Dec. 15-17	4.0	-	1.0	4.2	4.1	-	7.5	5.0	25.8
Dec. 22-24	4.9	-	2.0	3.4	4.4	-	6.7	5.4	26.8
Dec. 29-31	4.1	-	1.4	3.3	4.5	-	4.4	6.0	23.7

1/ Observations made in 60 self-service food stores in the Philadelphia metropolitan area, each with two or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ Less than 0.05 pounds.

3/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

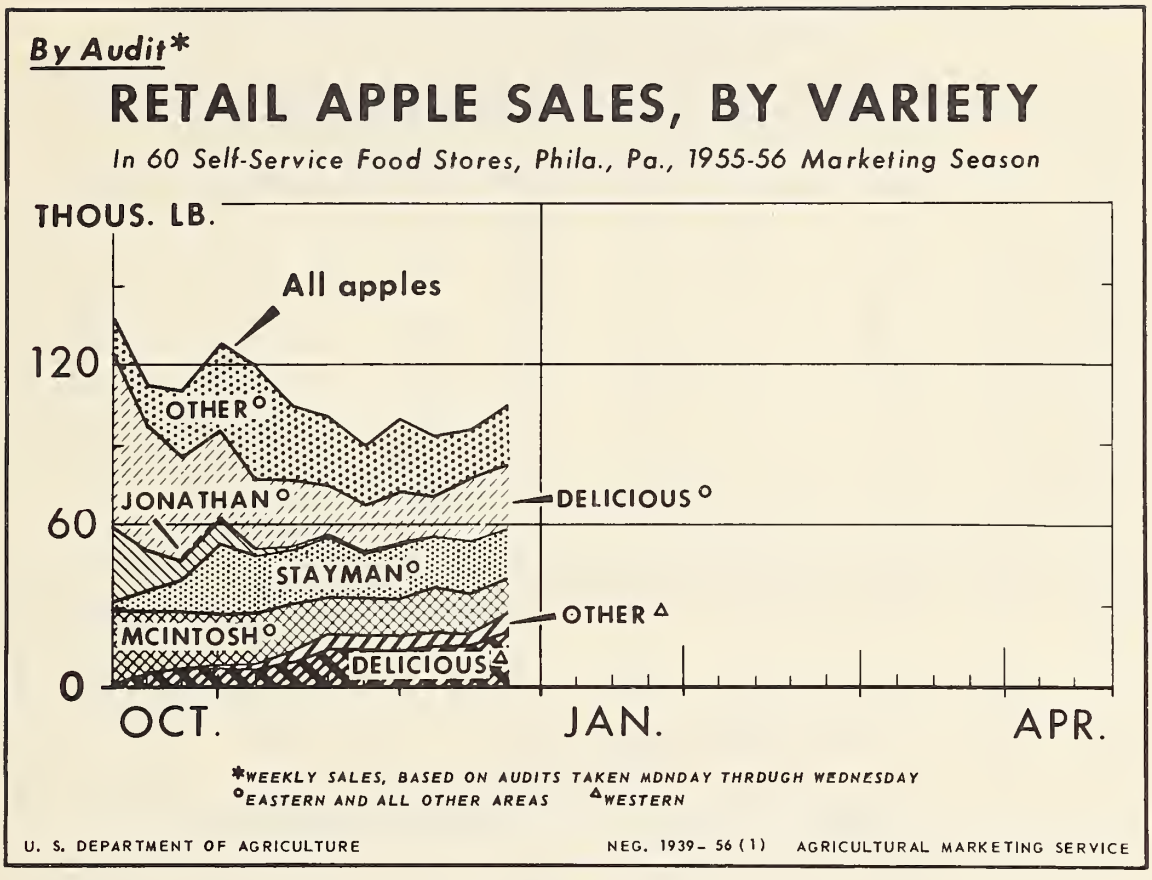

Figure 4

Table 5.--Apples: Quantity sold at retail, 1955-56 marketing season to date 1/

Period ending 2/	Origin and variety								All varieties
	Western area			Eastern and all other areas					
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties	
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Oct. 10-12	672	-	-	27,663	3,037	27,818	64,668	13,423	137,281
Oct. 17-19	4,110	-	13	23,921	7,417	16,198	45,474	15,603	112,736
Oct. 24-26	6,072	-	65	21,819	11,263	8,126	37,919	25,661	110,925
Oct. 31-Nov. 2	6,602	-	552	19,183	27,179	8,809	33,547	32,208	128,080
Nov. 7-9	6,317	-	1,890	19,086	21,609	2,207	26,157	41,869	119,135
Nov. 14-16	8,407	-	4,111	17,976	20,351	599	25,372	27,662	104,478
Nov. 21-23	13,318	-	5,719	14,053	22,943	80	18,763	25,809	100,685
Nov. 28-30	13,274	-	5,331	13,709	16,932	12	17,429	22,853	89,540
Dec. 5-7	12,930	-	5,583	13,462	20,118	148	19,991	27,396	99,628
Dec. 12-14	14,740	-	5,325	16,417	19,055	-	15,268	22,677	93,482
Dec. 19-21	14,665	-	3,885	15,922	19,606	-	23,269	18,595	95,941
Dec. 26-28	19,314	-	7,141	13,661	18,555	-	23,296	22,602	104,569

1/ Obtained by audit in 60 self-service food stores in the Philadelphia metropolitan area, each with two or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ Ending inventories for determining sales during the preceding week are taken at the same time on Monday, Tuesday, or Wednesday in each store each week.

Table 6.--Apples: Number of retail stores carrying each variety, by observation approach, 1955-56 marketing season to date 1/

Period covered	Origin and variety							
	Western area			Eastern and all other areas				
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties
	Number	Number	Number	Number	Number	Number	Number	Number
Oct. 6-8	8	-	2	48	6	32	58	34
Oct. 13-15	9	-	1	51	14	21	58	54
Oct. 20-22	15	-	2	53	23	13	57	52
Oct. 27-29	24	-	2	53	33	10	56	49
Nov. 3-5	35	-	9	53	38	3	52	54
Nov. 10-12	38	-	17	54	37	2	54	50
Nov. 17-19	43	-	28	54	38	3	49	48
Nov. 25-26 2/	29	-	29	42	33	4	37	52
Dec. 1-3	47	-	34	52	33	1	42	52
Dec. 8-10	48	-	35	51	35	-	36	50
Dec. 15-17	50	-	36	52	33	-	38	50
Dec. 22-24	49	-	40	51	32	-	35	43
Dec. 29-31	49	-	39	49	33	-	37	45

1/ Includes 60 self-service food stores in the Philadelphia metropolitan area, each with two or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

Table 7.--Apples: Number of retail stores carrying each variety, by audit approach, 1955-56 marketing season to date 1/

Period ending 2/	Origin and variety							
	Western area			Eastern and all other areas				
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties
	Number	Number	Number	Number	Number	Number	Number	Number
Oct. 10-12	10	-	-	54	8	48	60	50
Oct. 17-19	14	-	1	57	21	28	59	54
Oct. 24-26	22	-	2	57	30	20	58	57
Oct. 31-Nov. 2	32	-	3	54	34	19	56	55
Nov. 7-9	33	-	14	53	38	9	55	56
Nov. 14-16	39	-	24	56	39	4	55	52
Nov. 21-23	45	-	31	54	38	2	50	49
Nov. 28-30	44	-	32	51	38	1	42	48
Dec. 5-7	49	-	36	51	37	1	43	52
Dec. 12-14	50	-	35	53	38	-	37	51
Dec. 19-21	50	-	35	54	31	-	39	48
Dec. 26-28	47	-	39	51	39	-	38	48

1/ Includes 60 self-service food stores in the Philadelphia metropolitan area, each with two or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ Ending inventories for determining sales during the preceding week are taken at the same time on Monday, Tuesday, or Wednesday in each store each week.

Table 8.--Apples: Retail price per pound, 1955-56 marketing season to date 1/

Period covered	Most frequent prices							
	Origin and variety							
	Western area			Eastern and all other areas				
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Oct. 6-8	19	-	2/	8, 15	2/	10	8	13
Oct. 13-15	19	-	2/	15	13	15	15	13
Oct. 20-22	19	-	2/	15	15, 20	15	15	15
Oct. 27-29	19	-	2/	15	15	13	15	10
Nov. 3-5	19	-	29	15	13	2/	15	10
Nov. 10-12	19	-	29	15	13	2/	15	13
Nov. 17-19	19	-	29	15	10	2/	15	15
Nov. 25-26 3/	19	-	29	15	15	2/	15	15
Dec. 1-3	19	-	29	18	15	2/	18	15
Dec. 8-10	19	-	29	18	15	-	18	15
Dec. 15-17	19	-	29	18	13	-	13	15
Dec. 22-24	19	-	29	18	13	-	15	15
Dec. 29-31	23	-	29	15	15	-	15	15
	Highest price							
Oct. 6-8	19	-	2/	25	2/	10	25	15
Oct. 13-15	24	-	2/	20	25	15	20	19
Oct. 20-22	25	-	2/	22	20	17	20	19
Oct. 27-29	29	-	2/	20	19	15	20	35
Nov. 3-5	35	-	30	20	19	2/	25	29
Nov. 10-12	25	-	35	20	20	2/	25	30
Nov. 17-19	29	-	35	25	20	2/	29	23
Nov. 25-26 3/	29	-	29	20	18	2/	20	25
Dec. 1-3	33	-	35	25	20	2/	20	25
Dec. 8-10	25	-	49	25	18	-	20	29
Dec. 15-17	29	-	35	23	20	-	20	20
Dec. 22-24	30	-	45	24	20	-	20	20
Dec. 29-31	25	-	35	19	20	-	25	20
	Lowest price							
Oct. 6-8	18	-	2/	5	2/	5	7	6
Oct. 13-15	15	-	2/	5	10	8	7	7
Oct. 20-22	10	-	2/	5	6	8	5	5
Oct. 27-29	10	-	2/	5	8	8	7	6
Nov. 3-5	15	-	25	10	8	2/	8	6
Nov. 10-12	15	-	20	6	6	2/	9	6
Nov. 17-19	13	-	25	6	8	2/	8	5
Nov. 25-26 3/	15	-	29	12	8	2/	10	6
Dec. 1-3	15	-	19	8	8	2/	10	7
Dec. 8-10	15	-	19	10	10	-	6	6
Dec. 15-17	15	-	19	10	10	-	10	5
Dec. 22-24	13	-	15	10	10	-	10	9
Dec. 29-31	13	-	15	8	9	-	7	5

1/ Observations made in 60 self-service food stores in the Philadelphia metropolitan area, each with 2 or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ Insufficient number reporting to be reliable.

3/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

Table 9.--Apples: Average retail price per pound, 1955-56 marketing season to date 1/

Period ending 2/	Origin and variety								Average all varieties
	Western area			Eastern and all other areas					
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Oct. 10-12	17.9	-	-	13.2	13.5	9.1	13.3	13.0	12.6
Oct. 17-19	15.9	-	3/	13.0	14.6	10.1	12.9	10.8	12.5
Oct. 24-26	18.9	-	22.2	15.1	14.0	11.9	12.9	11.6	13.5
Oct. 31-Nov 2	18.7	-	28.6	15.1	13.7	11.5	13.4	12.0	13.6
Nov. 7-9	18.6	-	28.0	15.8	13.8	11.0	14.1	10.8	13.5
Nov. 14-16	19.7	-	29.1	15.3	12.6	10.7	13.7	11.4	14.2
Nov. 21-23	19.3	-	28.7	16.4	12.9	9.6	15.7	12.3	15.5
Nov. 28-30	19.5	-	28.9	17.0	14.0	11.0	15.7	12.8	16.2
Dec. 5-7	19.8	-	28.5	16.6	14.2	11.0	15.1	12.6	15.7
Dec. 12-14	19.8	-	28.8	15.3	13.3	-	15.4	12.0	15.5
Dec. 19-21	20.4	-	28.9	15.3	14.3	-	14.8	12.6	15.7
Dec. 26-28	21.0	-	28.8	15.8	14.6	-	15.5	13.3	16.7

1/ Obtained by audit in 60 self-service food stores in the Philadelphia metropolitan area, each with 2 or more check-out counters. Dash (-) indicates that this variety was not available during this period.
2/ Ending inventories for determining sales during the preceding week are taken at the same time on Monday, Tuesday, or Wednesday in each store each week.
3/ Insufficient number reporting to be reliable.

Table 10.--Retail price of specified fruits competing with apples, 1955-56 marketing season to date 1/

Period covered	Bananas	Grapefruit	Grapes	Oranges	Tangerines
	Cents per pound	Cents each	Cents per pound	Cents per dozen	Cents per dozen
Oct. 6-8	15.0	14.5	19.0	35.0	-
Oct. 13-15	15.0	9.7	19.0	39.0	-
Oct. 20-22	15.0	9.7	19.0	39.0	-
Oct. 27-29	15.0	9.7	15.0	29.0	-
Nov. 3-5	15.0	9.7	29.0	39.0	-
Nov. 10-12	15.0	9.7	19.0	39.0	2/
Nov. 17-19	15.0	9.7	19.0	39.0	49.0
Nov. 25-26 3/	15.0	9.7	29.0	39.0	49.0
Dec. 1-3	15.0	9.7	29.0	39.0	39.0
Dec. 8-10	15.0	9.7	19.0	39.0	39.0
Dec. 15-17	9.0	9.7	19.0	39.0	39.0
Dec. 22-24	15.0	9.7	25.0	39.0	39.0
Dec. 29-31	12.0, 15.0	9.7	19.0	39.0	39.0

1/ Observations made in 60 self-service food stores in the Philadelphia metropolitan area, each with 2 or more check-out counters. Dash (-) indicates that this variety was not available during this period.
2/ Insufficient number reporting to be reliable.
3/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

Table 11.--Condition of apples displayed: Percentage good, fair, or poor, by observation approach, 1955-56 marketing season to date 1/

Period covered	Good condition							
	Origin and variety							
	Western area			Eastern and all other areas				
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Oct. 6-8	100	-	100	71	100	69	96	67
Oct. 13-15	100	-	2/	96	92	68	90	81
Oct. 20-22	94	-	2/	89	88	76	86	76
Oct. 27-29	100	-	2/	85	76	92	80	85
Nov. 3-5	100	-	100	90	76	2/	91	86
Nov. 10-12	100	-	100	93	78	100	92	84
Nov. 17-19	100	-	100	92	87	2/	99	88
Nov. 25-26 3/	100	-	100	96	96	2/	93	93
Dec. 1-3	100	-	100	93	92	2/	92	91
Dec. 8-10	100	-	98	97	98	-	98	83
Dec. 15-17	100	-	98	97	94	-	99	86
Dec. 22-24	98	-	96	95	93	-	98	97
Dec. 29-31	100	-	93	88	95	-	98	96
	Fair condition							
Oct. 6-8	0	-	0	29	0	25	2	22
Oct. 13-15	0	-	2/	2	8	32	5	13
Oct. 20-22	6	-	2/	11	12	18	10	17
Oct. 27-29	0	-	2/	11	24	8	17	8
Nov. 3-5	0	-	0	7	14	2/	8	14
Nov. 10-12	0	-	0	7	17	0	6	10
Nov. 17-19	0	-	0	5	11	2/	1	9
Nov. 25-26 3/	0	-	0	4	4	2/	7	5
Dec. 1-3	0	-	0	7	6	2/	4	8
Dec. 8-10	0	-	2	3	2	-	2	10
Dec. 15-17	0	-	2	3	4	-	1	10
Dec. 22-24	2	-	2	5	7	-	2	3
Dec. 29-31	0	-	7	12	5	-	2	3
	Poor condition							
Oct. 6-8	0	-	0	0	0	6	2	11
Oct. 13-15	0	-	2/	2	0	0	5	6
Oct. 20-22	0	-	2/	0	0	6	4	7
Oct. 27-29	0	-	2/	4	0	0	3	7
Nov. 3-5	0	-	0	3	10	2/	1	0
Nov. 10-12	0	-	0	0	5	0	2	6
Nov. 17-19	0	-	0	3	2	2/	0	3
Nov. 25-26 3/	0	-	0	0	0	2/	0	2
Dec. 1-3	0	-	0	0	2	2/	4	1
Dec. 8-10	0	-	0	0	0	-	0	7
Dec. 15-17	0	-	0	0	2	-	0	4
Dec. 22-24	0	-	2	0	0	-	0	0
Dec. 29-31	0	-	0	0	0	-	0	1

1/ Includes 60 self-service food stores in the Philadelphia metropolitan area, each with 2 or more check-out counters. Dash (-) indicates that this variety was not available during this period.
2/ Insufficient number reporting to be reliable.
3/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

Table 12.--Condition of apples displayed: Percentage good, fair, or poor, by audit approach, 1955-56 marketing season to date 1/

Period covered	Western area			Eastern and all other areas				
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Good condition								
Origin and variety								
Oct. 24-26	100	-	100	92	79	45	81	76
Oct. 21-Nov. 2	97	-	100	89	83	100	92	87
Nov. 7-9	100	-	100	96	76	78	96	78
Nov. 14-16	100	-	100	97	80	2/	94	83
Nov. 21-23	100	-	100	96	88	2/	98	85
Nov. 28-30	100	-	100	93	90	2/	98	87
Dec. 5-7	100	-	100	94	95	2/	94	86
Dec. 12-14	100	-	97	98	90	-	100	87
Dec. 19-21	98	-	97	92	84	-	100	89
Dec. 26-28	100	-	96	96	90	-	97	93
Fair condition								
Oct. 24-26	0	-	0	8	21	50	14	14
Oct. 31-Nov. 2	3	-	0	7	11	0	8	11
Nov. 7-9	0	-	0	2	24	22	4	19
Nov. 14-16	0	-	0	2	20	2/	5	15
Nov. 21-23	0	-	0	4	10	2/	2	12
Nov. 28-30	0	-	0	5	10	2/	2	11
Dec. 5-7	0	-	0	6	5	2/	6	11
Dec. 12-14	0	-	3	2	8	-	0	10
Dec. 19-21	2	-	3	6	13	-	0	8
Dec. 26-28	0	-	2	4	10	-	3	7
Poor condition								
Oct. 24-26	0	-	0	0	0	5	5	10
Oct. 31-Nov. 2	0	-	0	4	6	0	0	2
Nov. 7-9	0	-	0	2	0	0	0	3
Nov. 14-16	0	-	0	1	0	2/	1	2
Nov. 21-23	0	-	0	0	2	2/	0	3
Nov. 28-30	0	-	0	2	0	2/	0	2
Dec. 5-7	0	-	0	0	0	2/	0	3
Dec. 12-14	0	-	0	0	2	-	0	3
Dec. 19-21	0	-	0	2	3	-	0	3
Dec. 26-28	0	-	2	0	0	-	0	0

1/ Includes 60 self-service food stores in the Philadelphia metropolitan area, each with 2 or more check-out counters. Dash (-) indicates that this variety was not available during this period.
2/ Insufficient number reporting to be reliable.

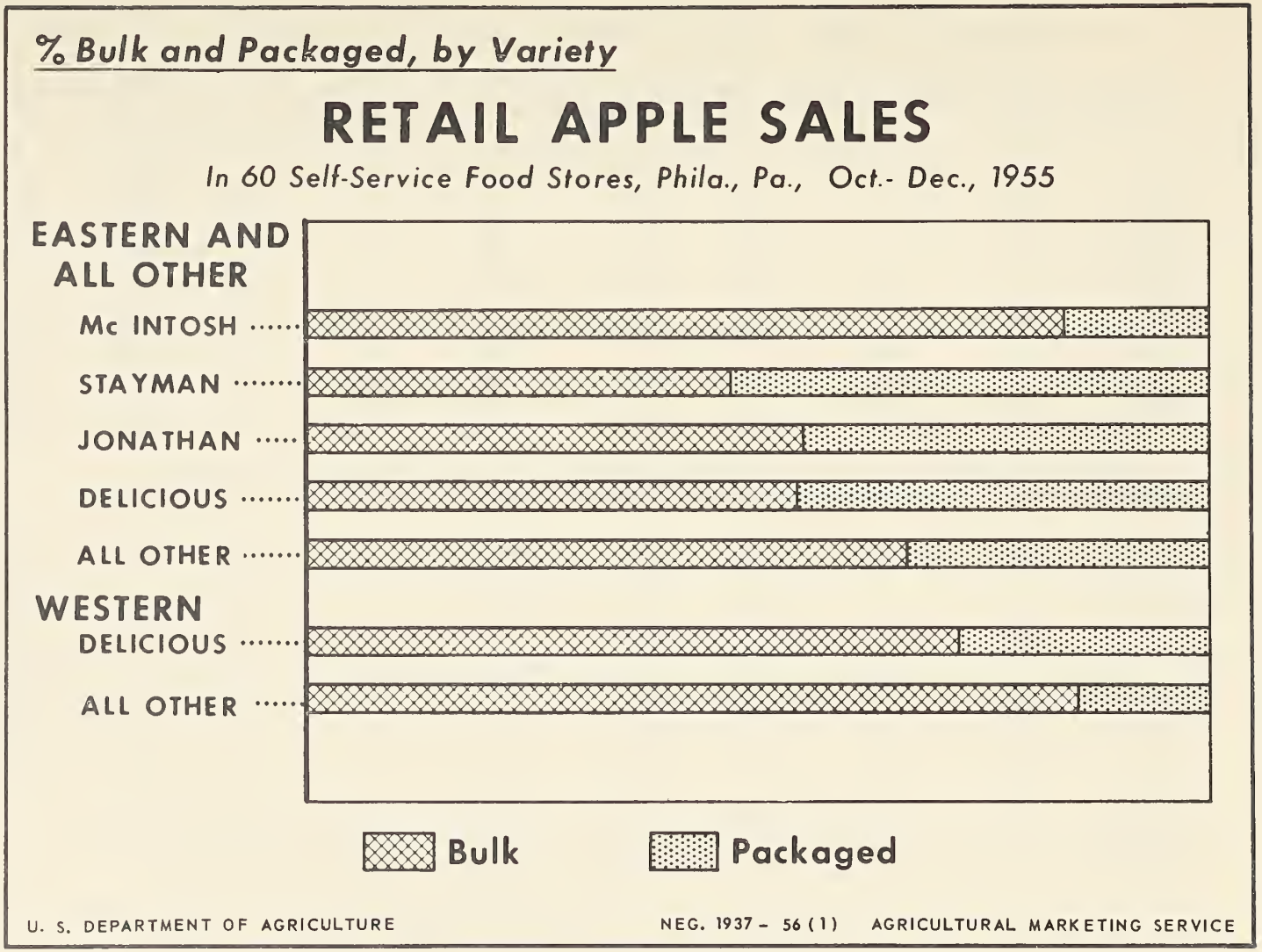
% Bulk and Packaged, by Variety
RETAIL APPLE SALES
In 60 Self-Service Food Stores, Phila., Pa., Oct.- Dec., 1955
EASTERN AND ALL OTHER
Mc INTOSH
STAYMAN
JONATHAN
DELICIOUS
ALL OTHER
WESTERN
DELICIOUS
ALL OTHER
Bulk
Packaged
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1937 - 56 (1) AGRICULTURAL MARKETING SERVICE

Figure 5

Table 13.--Apples: Percentage of retail sales in package or bulk, 1955-56 marketing season to date 1/

Period covered	Packaged sales							
	Origin and variety							
	Western area			Eastern and all other areas				
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Oct. 20-22	34	-	0	13	26	35	69	36
Oct. 27-29	24	-	0	17	34	59	53	34
Nov. 3-5	19	-	12	18	41	33	29	57
Nov. 10-12	18	-	14	13	60	0	21	34
Nov. 17-19	28	-	13	15	70	100	23	7
Nov. 25-26 2/	13	-	0	6	58	3/	33	9
Dec. 1-3	46	-	3	21	59	100	52	15
Dec. 8-10	45	-	37	11	53	-	47	27
Dec. 15-17	24	-	10	19	64	-	43	34
Dec. 22-24	27	-	14	14	43	-	34	38
Dec. 29-31	20	-	8	25	61	-	47	33
	Bulk sales							
Oct. 20-22	66	-	100	87	74	65	31	64
Oct. 27-29	76	3/	100	83	66	41	47	66
Nov. 3-5	81	-	88	82	59	67	71	43
Nov. 10-12	82	-	86	87	40	100	79	66
Nov. 17-19	72	-	87	85	30	0	77	93
Nov. 25-26 2/	87	-	100	94	42	3/	67	91
Dec. 1-3	54	-	97	79	41	0	48	85
Dec. 8-10	55	-	63	89	47	-	53	73
Dec. 15-17	76	-	90	81	36	-	57	66
Dec. 22-24	73	-	86	86	57	-	66	62
Dec. 29-31	80	-	92	75	39	-	53	67

1/ Observations made in 60 self-service food stores in the Philadelphia metropolitan area, each with two or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

3/ Insufficient number reporting to be reliable.

Table 14.--Percentage of retail stores selling apples in package, bulk, or both, 1955-56 marketing season to date 1/

Period covered	Western area			Eastern and all other areas				
	Delicious	Winesap	Other varieties	McIntosh	Stayman	Jonathan	Delicious	Other varieties
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Packaged sales								
Oct. 6-8	0	-	0	27	0	60	18	14
Oct. 13-15	0	-	2/	11	0	14	13	18
Oct. 20-22	0	-	0	4	0	23	5	2
Oct. 27-29	21	2/	2/	8	0	40	9	2
Nov. 3-5	17	-	0	13	5	33	9	5
Nov. 10-12	16	-	18	9	5	0	2	2
Nov. 17-19	16	-	0	13	13	33	10	4
Nov. 25-26 3/	18	-	7	11	0	50	12	9
Dec. 1-3	28	-	3	10	18	2/	7	10
Dec. 8-10	21	-	6	12	20	-	14	10
Dec. 15-17	20	-	3	12	9	-	8	24
Dec. 22-24	16	-	5	10	9	-	11	21
Dec. 29-31	12	-	5	10	15	-	22	24
Bulk sales								
Oct. 6-8	100	-	100	32	67	27	59	79
Oct. 13-15	0	-	2/	56	100	22	48	75
Oct. 20-22	92	-	100	79	73	46	44	70
Oct. 27-29	75	2/	2/	77	64	30	50	59
Nov. 3-5	77	-	89	76	58	67	60	56
Nov. 10-12	79	-	82	83	45	100	70	55
Nov. 17-19	75	-	86	76	40	67	70	73
Nov. 25-26 3/	73	-	86	78	47	50	76	74
Dec. 1-3	66	-	88	80	48	2/	48	58
Dec. 8-10	60	-	83	75	43	-	58	54
Dec. 15-17	62	-	86	76	49	-	45	52
Dec. 22-24	68	-	87	80	53	-	60	51
Dec. 29-31	69	-	87	74	55	-	59	52
Both package and bulk								
Oct. 6-8	0	-	0	41	33	13	23	7
Oct. 13-15	100	-	2/	33	0	64	39	7
Oct. 20-22	8	-	0	17	27	31	51	28
Oct. 27-29	4	2/	2/	15	36	30	41	39
Nov. 3-5	6	-	11	11	37	0	31	39
Nov. 10-12	5	-	0	8	50	0	28	43
Nov. 17-19	9	-	14	11	47	0	20	23
Nov. 25-26 3/	9	-	7	11	53	0	12	17
Dec. 1-3	6	-	9	10	34	2/	45	32
Dec. 8-10	19	-	11	13	37	-	28	36
Dec. 15-17	18	-	11	12	42	-	47	24
Dec. 22-24	16	-	8	10	38	-	29	28
Dec. 29-31	19	-	8	16	30	-	19	24

1/ Observations made in 60 self-service food stores in the Philadelphia metropolitan area, each with two or more check-out counters. Dash (-) indicates that this variety was not available during this period.

2/ Insufficient number reporting to be reliable.

3/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

Table 15.--Apples: Weather conditions during the periods of observation, 1955-56 marketing season to date 1/

Period covered	Snow	Rain	Cloudy	Clearing	Fair
	Percent	Percent	Percent	Percent	Percent
Oct. 6-8	0	36	29	7	28
Oct. 13-15	0	48	29	0	23
Oct. 20-22	0	5	3	2	90
Oct. 27-29	0	0	7	0	93
Nov. 3-5	0	9	53	2	36
Nov. 10-12	0	13	23	6	58
Nov. 17-19	19	3	0	0	78
Nov. 25-26 2/	0	0	44	4	52
Dec. 1-3	8	8	17	0	67
Dec. 8-10	26	7	15	4	48
Dec. 15-17	0	0	12	0	88
Dec. 22-24	18	0	65	0	17
Dec. 29-31	4	4	64	0	28

1/ Observations made in 60 self-service food stores in the Philadelphia metropolitan area, each with two or more check-out counters.

2/ Data for Nov. 25-26 projected to 60 stores to compensate for observations not taken on Thanksgiving, Nov. 24.

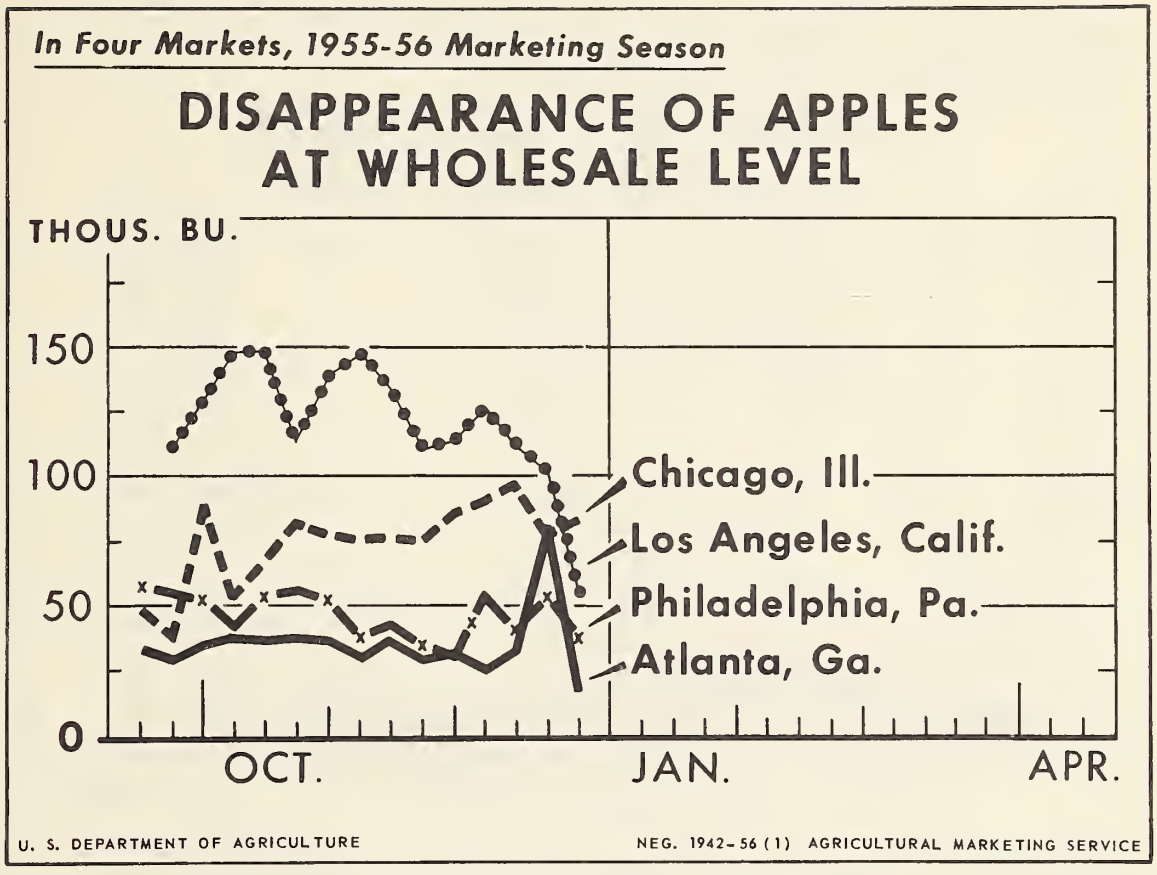

Figure 6

Table 16.--Apples: Disappearance at wholesale level to all outlets in four markets, 1955-56 marketing season to date

Period covered	Atlanta	Chicago	Los Angeles	Philadelphia
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Sept. 16-23	33.1	48.0	1/	57.4
Sept. 23-30	28.1	38.3	111.5	54.4
Sept. 30-Oct. 7	35.1	89.5	129.1	52.6
Oct. 7-14	38.1	52.6	148.2	41.3
Oct. 14-21	37.0	67.6	148.5	52.8
Oct. 21-28	38.1	82.3	113.1	55.2
Oct. 28-Nov. 4	37.4	77.8	139.4	51.2
Nov. 4-10 2/	30.6	74.9	147.4	38.1
Nov. 10-18 2/	36.9	75.7	133.8	42.5
Nov. 18-25	29.4	74.8	110.4	34.7
Nov. 25-Dec. 2	31.2	85.7	113.6	31.1
Dec. 2-9	25.3	90.2	126.5	53.0
Dec. 9-16	32.7	97.0	111.7	41.3
Dec. 16-23	78.0	77.7	101.2	52.9
Dec. 23-30	18.2	82.2	54.4	36.6

1/ Data incomplete.
2/ Because of holiday November 11, week of November 4-10 includes only 6 days and week of November 10-18 includes 8 days.

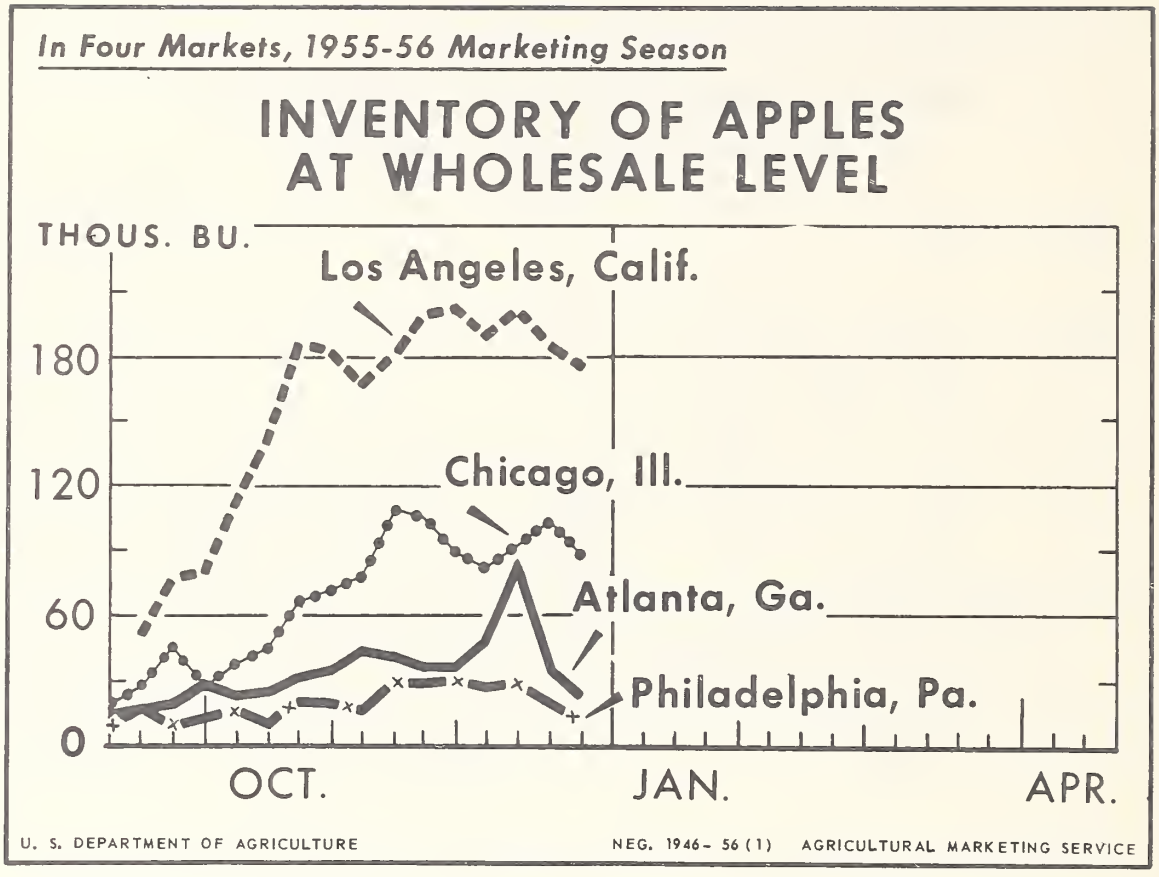

Figure 7

Table 17.--Apples: Inventory at wholesale level in four markets, 1955-56 marketing season to date

Period covered	Atlanta	Chicago	Los Angeles	Philadelphia
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Sept. 16	12.2	19.9	1/	9.2
Sept. 23	15.8	27.6	51.0	10.7
Sept. 30	17.8	45.8	77.0	8.3
Oct. 7	27.8	28.5	79.7	11.4
Oct. 14	22.7	38.2	110.2	14.6
Oct. 21	23.7	45.3	142.2	9.2
Oct. 28	31.0	66.3	185.0	19.4
Nov. 4	34.5	72.0	181.9	19.4
Nov. 10 2/	43.6	78.8	167.4	15.7
Nov. 18 2/	41.3	109.5	181.4	29.9
Nov. 25	36.5	106.3	198.3	29.4
Dec. 2	36.0	90.1	204.7	30.8
Dec. 9	47.0	82.9	189.0	26.8
Dec. 16	83.5	93.1	201.4	29.3
Dec. 23	34.9	104.1	184.9	19.5
Dec. 30	22.3	88.3	177.7	10.4

1/ Data incomplete.
2/ Because of holiday November 11, week of November 4-10 includes only 6 days and week of November 10-18 includes 8 days.

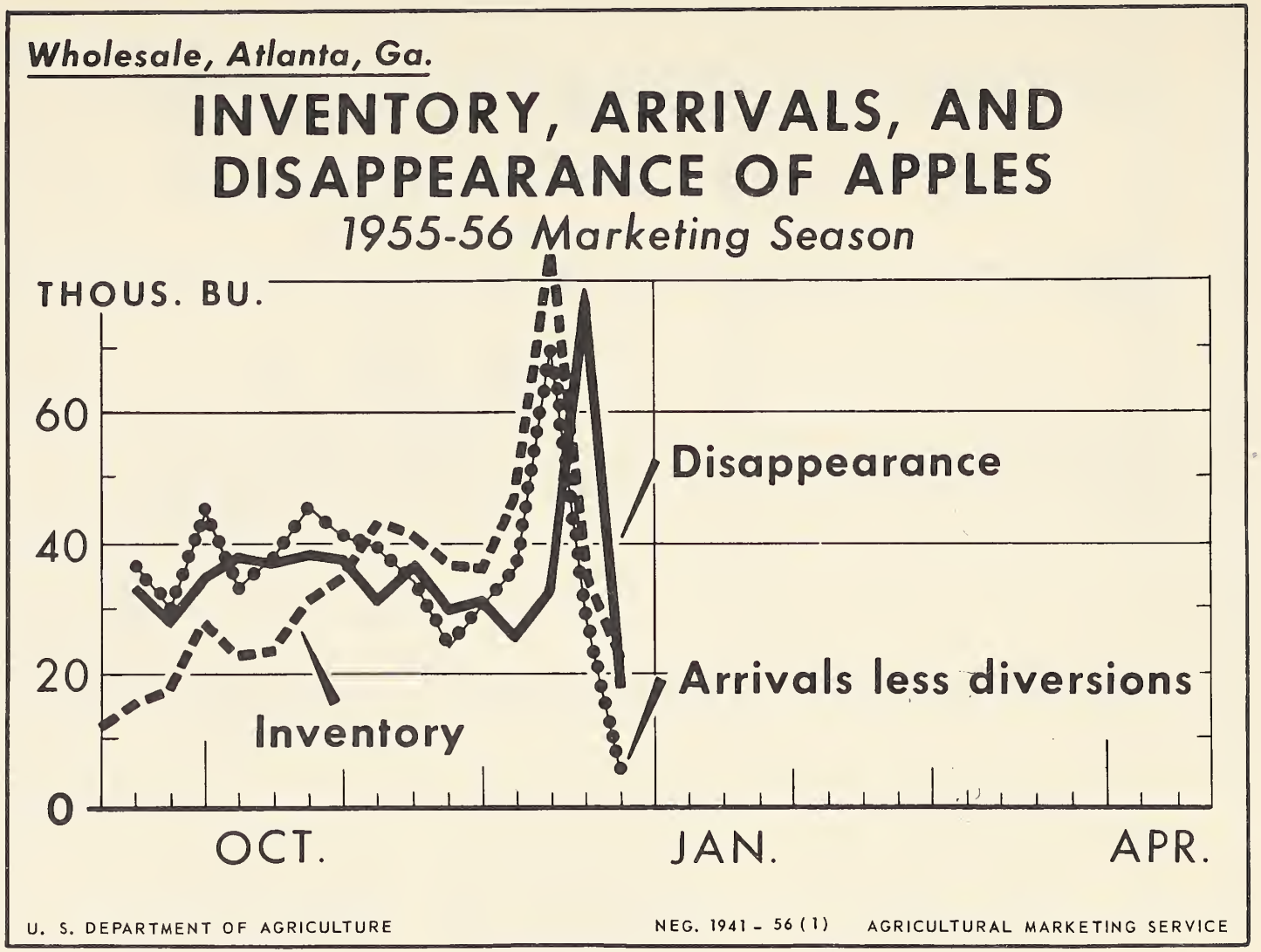
Wholesale, Atlanta, Ga.
INVENTORY, ARRIVALS, AND DISAPPEARANCE OF APPLES
1955-56 Marketing Season
THOUS. BU.
60
40
20
0
Disappearance
Arrivals less diversions
Inventory
OCT.
JAN.
APR.
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1941 - 56 (1)
AGRICULTURAL MARKETING SERVICE

Figure 8

Table 18.--Apples: Wholesale inventory, arrivals less diversions, and disappearance, Atlanta, Ga., 1955-56 marketing season to date

Period	Total	Variety		
		Delicious	Winesap	Others
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Inventory				
Sept. 16	12.2	4.5	0	7.7
Sept. 23	15.8	8.2	0	7.6
Sept. 30	17.8	10.4	0	7.4
Oct. 7	27.8	12.4	0	15.4
Oct. 14	22.7	10.6	0	12.1
Oct. 21	23.7	6.5	0.9	16.3
Oct. 28	31.0	9.6	.3	21.1
Nov. 4	34.5	13.0	.7	20.8
Nov. 10 1/	43.6	15.6	.9	27.1
Nov. 18 1/	41.3	18.9	.9	21.5
Nov. 25	36.5	17.3	.1	19.1
Dec. 2	36.0	17.1	.9	18.0
Dec. 9	47.0	25.6	1.1	20.3
Dec. 16	83.5	49.0	5.2	29.3
Dec. 23	34.9	19.9	1.8	13.2
Dec. 30	22.3	14.2	2.5	5.6
Arrivals less diversions				
Sept. 16-23	36.7	15.9	0	20.8
Sept. 23-30	30.1	16.0	0	14.1
Sept. 30-Oct. 7	45.1	19.1	0	26.0
Oct. 7-14	33.0	9.3	0	23.7
Oct. 14-21	38.0	7.5	0.9	29.6
Oct. 21-28	45.4	14.4	2.0	29.0
Oct. 28-Nov. 4	40.9	12.3	.4	28.2
Nov. 4-10 1/	39.7	9.6	.7	29.4
Nov. 10-18 1/	34.6	14.2	1.1	19.3
Nov. 18-25	24.6	6.7	.8	17.1
Nov. 25-Dec. 2	30.7	10.0	3.7	17.0
Dec. 2-9	36.3	14.6	2.2	19.5
Dec. 9-16	69.2	30.8	4.7	33.7
Dec. 16-23	29.4	12.6	.8	16.0
Dec. 23-30	5.6	2.3	.8	2.5
Disappearance				
Sept. 16-23	33.1	12.2	0	20.9
Sept. 22-30	28.1	13.8	0	14.3
Sept. 30-Oct. 7	35.1	17.1	0	18.0
Oct. 7-14	38.1	11.1	0	27.0
Oct. 14-21	37.0	11.6	0	25.4
Oct. 21-28	38.1	11.3	2.6	24.2
Oct. 28-Nov. 4	37.4	8.9	0	28.5
Nov. 4-10 1/	30.6	7.0	0.5	23.1
Nov. 10-18 1/	36.9	10.9	1.1	24.9
Nov. 18-25	29.4	8.3	1.6	19.5
Nov. 25-Dec. 2	31.2	10.2	2.9	18.1
Dec. 2-9	25.3	6.1	2.0	17.2
Dec. 9-16	32.7	7.4	.6	24.7
Dec. 16-23	78.0	41.7	4.2	32.1
Dec. 23-30	18.2	8.0	.1	10.1

1/ Because of holiday November 11, week of November 4-10 includes only 6 days and week of November 10-18 includes 8 days.

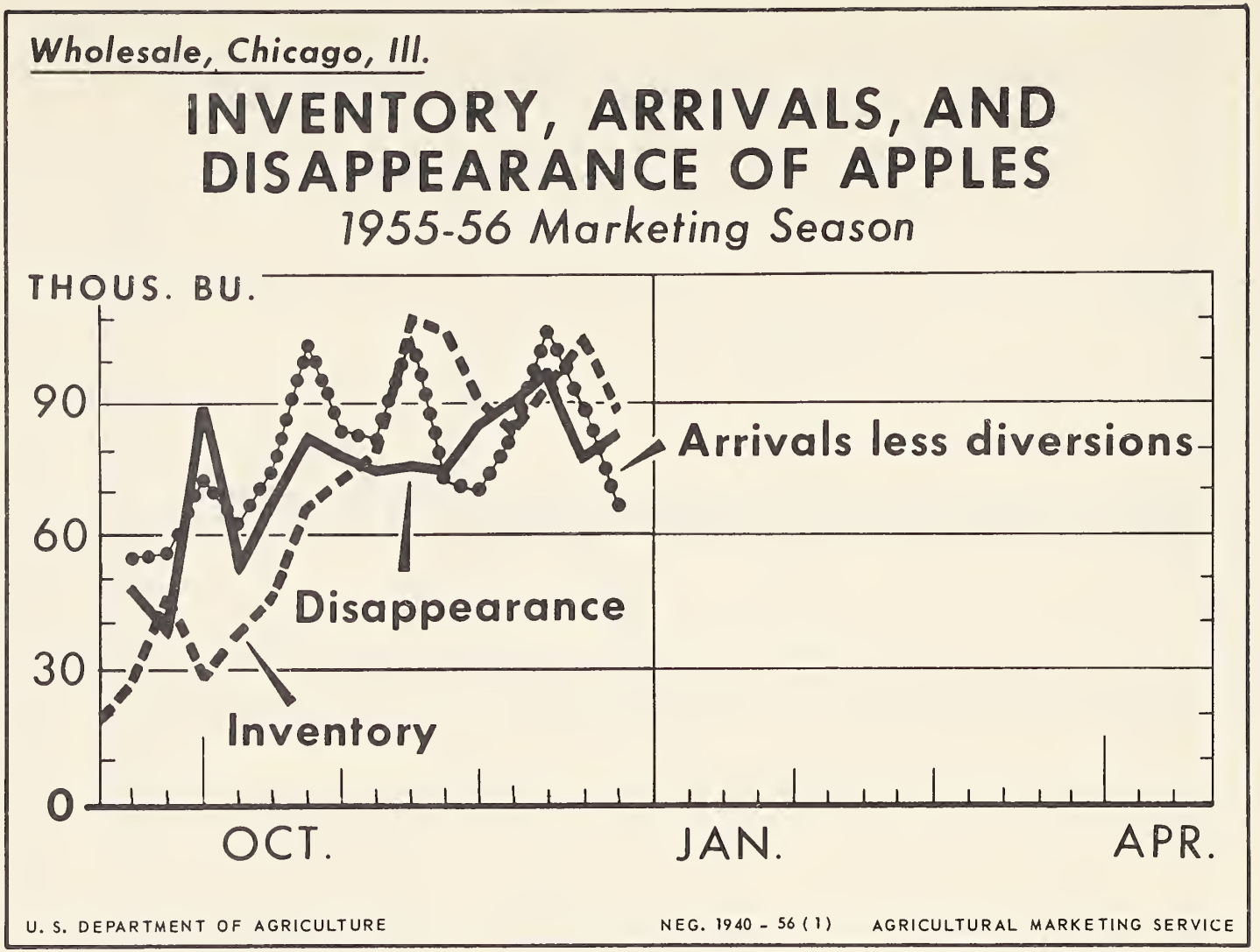
Wholesale, Chicago, Ill.
INVENTORY, ARRIVALS, AND DISAPPEARANCE OF APPLES
1955-56 Marketing Season
THOUS. BU.
90
60
30
0
Arrivals less diversions
Disappearance
Inventory
OCT.
JAN.
APR.
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1940 - 56 (1)
AGRICULTURAL MARKETING SERVICE

Figure 9

Table 19.--Apples: Wholesale inventory, arrivals less diversions, and disappearance, Chicago, Ill., 1955-56 marketing season to date

Period	Inventory 1/			
	Total	Variety		
		Delicious	Winesap	Other
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Inventory 1/				
Sept. 16	19.9	4.3	0	15.6
Sept. 23	27.6	10.3	0	17.3
Sept. 30	45.8	12.8	0	33.0
Oct. 7	28.5	4.4	0	24.1
Oct. 14	38.2	11.5	0	26.7
Oct. 21	45.3	18.9	0	26.4
Oct. 28	66.3	37.0	0	29.3
Nov. 4	72.0	29.6	0	42.4
Nov. 10 2/	78.8	34.2	0	44.6
Nov. 18 2/	109.5	51.5	0	58.0
Nov. 25	106.3	54.1	0	52.2
Dec. 2	90.1	41.1	0	49.0
Dec. 9	82.9	28.5	0	54.4
Dec. 16	93.1	42.6	1.3	49.2
Dec. 23	104.1	48.3	1.3	54.5
Dec. 30	88.3	47.6	2.5	38.2
Arrivals less diversions				
Sept. 16-23	55.7	23.3	0	32.4
Sept. 23-30	56.5	24.5	0	32.0
Sept. 30-Oct. 7	72.2	8.3	0	63.9
Oct. 7-14	62.3	12.5	0	49.8
Oct. 14-21	74.7	18.6	0	56.1
Oct. 21-28	103.3	35.8	0	67.5
Oct. 28-Nov. 4	83.5	28.2	0	55.3
Nov. 4-10 2/	81.7	30.8	0	50.9
Nov. 10-18 2/	106.4	40.3	0	66.1
Nov. 18-25	71.6	33.1	0	38.5
Nov. 25-Dec. 2	69.5	19.4	0	50.1
Dec. 2-9	83.0	21.9	0	61.1
Dec. 9-16	107.2	43.8	1.6	61.8
Dec. 16-23	88.7	31.9	.8	56.0
Dec. 23-30	66.4	34.3	2.4	29.7
Disappearance 1/				
Sept. 16-23	48.0	17.3	0	30.7
Sept. 23-30	38.3	22.0	0	16.3
Sept. 30-Oct. 7	89.5	16.7	0	72.8
Oct. 7-14	52.6	5.4	0	47.2
Oct. 14-21	67.6	11.2	0	56.4
Oct. 21-28	82.3	17.7	0	64.6
Oct. 28-Nov. 4	77.8	35.6	0	42.2
Nov. 4-10 2/	74.9	26.2	0	48.7
Nov. 10-18 2/	75.7	23.0	0	52.7
Nov. 18-25	74.8	30.5	0	44.3
Nov. 25-Dec. 2	85.7	32.4	0	53.3
Dec. 2-9	90.2	34.5	0	55.7
Dec. 9-16	97.0	29.7	0.3	67.0
Dec. 16-23	77.7	26.2	.8	50.7
Dec. 23-30	82.2	35.0	1.2	46.0

1/ Differs from weekly reports because of change in method of handling "on-track" holdings.
2/ Because of holiday November 11, week of November 4-10 includes only 6 days and week of November 10-18 includes 8 days.

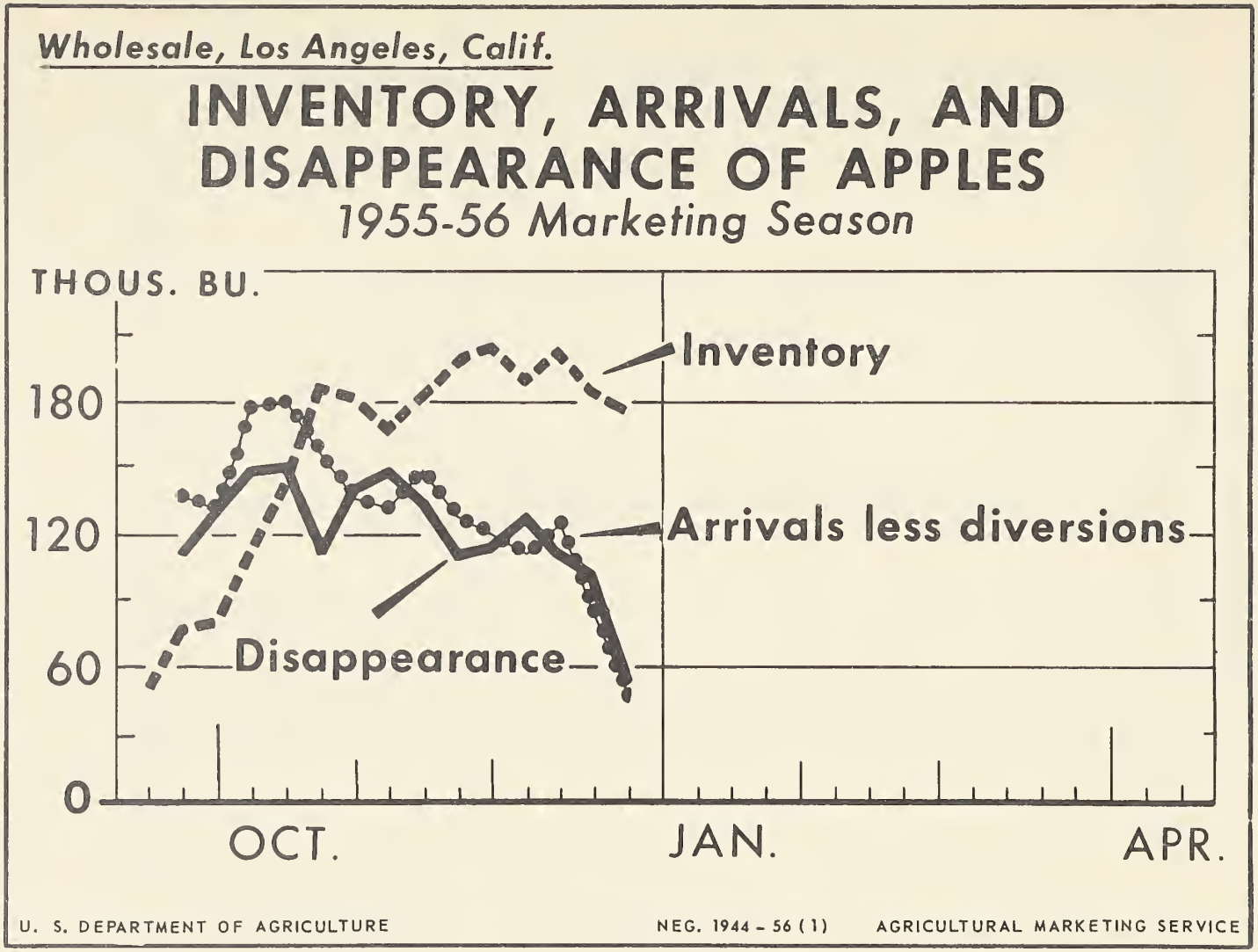
Wholesale, Los Angeles, Calif.
INVENTORY, ARRIVALS, AND DISAPPEARANCE OF APPLES
1955-56 Marketing Season
THOUS. BU.
180
120
60
0
Inventory
Arrivals less diversions
Disappearance
OCT.
JAN.
APR.
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1944 - 56 (1)
AGRICULTURAL MARKETING SERVICE

Figure 10

Table 20.--Apples: Wholesale inventory, arrivals less diversions, and disappearance, Los Angeles, Calif., 1955-56 marketing season to date

Period	Total	Variety		
		Delicious	Winesap	Others
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Inventory 1/				
Sept. 23	51.0	25.1	0	25.9
Sept. 30	77.0	33.0	0	44.0
Oct. 7	79.7	31.1	0	48.6
Oct. 14	110.2	56.3	0	53.9
Oct. 21	142.2	74.1	0	68.1
Oct. 28	185.0	96.8	0	88.2
Nov. 4	181.9	89.1	0.5	92.3
Nov. 10 2/	167.4	84.1	0	83.3
Nov. 18 2/	181.4	98.5	0	82.9
Nov. 25	198.3	104.3	0	94.0
Dec. 2	204.7	111.6	2.7	90.4
Dec. 9	189.0	108.4	5.7	74.9
Dec. 16	201.4	110.8	11.8	78.8
Dec. 23	184.9	100.6	12.7	71.6
Dec. 30	177.7	94.1	14.7	68.9
Arrivals less diversions				
Sept. 23-30	137.5	55.0	0	82.5
Sept. 30-Oct. 7	131.8	52.7	0	79.1
Oct. 7-14	178.7	98.3	0	80.4
Oct. 14-21	180.5	86.7	0	93.8
Oct. 21-28	155.9	67.9	0.1	87.9
Oct. 28-Nov. 4	136.3	50.9	0.8	84.6
Nov. 4-10 2/	132.9	52.6	0	80.3
Nov. 10-18 2/	147.8	82.4	0	65.4
Nov. 18-25	127.3	57.4	0.6	69.3
Nov. 25-Dec. 2	120.0	65.6	4.1	50.3
Dec. 2-9	110.8	48.4	8.8	53.6
Dec. 9-16	124.1	69.0	11.8	43.3
Dec. 16-23	84.7	45.5	10.8	28.4
Dec. 23-30	47.2	20.2	8.2	18.8
Disappearance 1/				
Sept. 23-30	111.5	47.1	0	64.4
Sept. 30-Oct. 7	129.1	54.6	0	74.5
Oct. 7-14	148.2	73.1	0	75.1
Oct. 14-21	148.5	68.9	0	79.6
Oct. 21-28	113.1	45.2	0.1	67.8
Oct. 28-Nov. 4	139.4	58.6	0.3	80.5
Nov. 4-10 2/	147.4	57.6	0.5	89.3
Nov. 10-18 2/	133.8	68.0	0	65.8
Nov. 18-25	110.4	51.6	0.6	58.2
Nov. 25-Dec. 2	113.6	58.3	1.4	53.9
Dec. 2-9	126.5	51.6	5.8	69.1
Dec. 9-16	111.7	66.6	5.7	39.4
Dec. 16-23	101.2	55.7	9.9	35.6
Dec. 23-30	54.4	26.7	6.2	21.5

1/ Differs from weekly reports due to change in method of handling "on-track" holdings.
2/ Because of holiday November 11, week of November 4-10 includes only 6 days and week of November 10-18 includes 8 days.

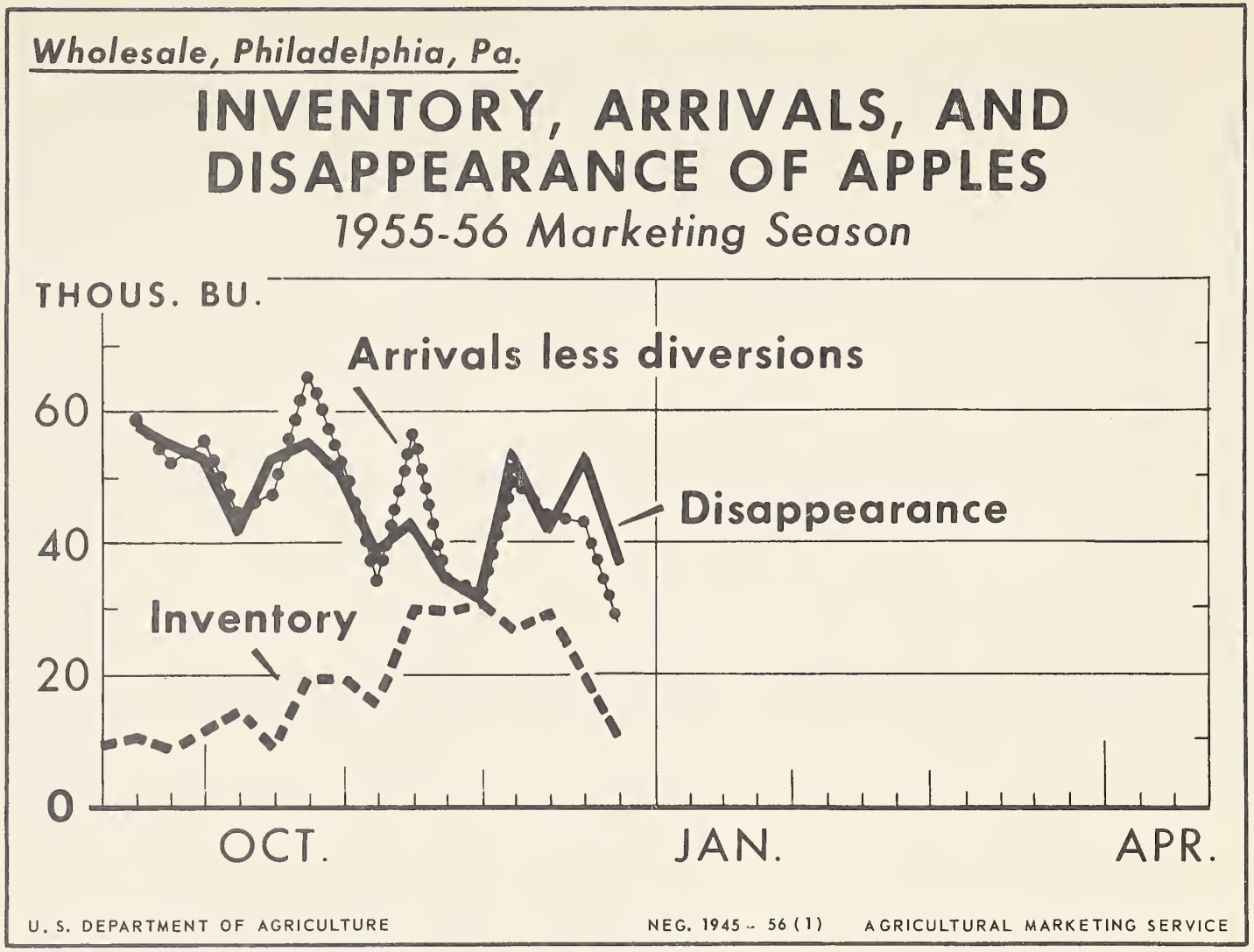
Wholesale, Philadelphia, Pa.
INVENTORY, ARRIVALS, AND DISAPPEARANCE OF APPLES
1955-56 Marketing Season
THOUS. BU.
60
40
20
0
Arrivals less diversions
Disappearance
Inventory
OCT.
JAN.
APR.
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1945 - 56 (1)
AGRICULTURAL MARKETING SERVICE

Figure 11

Table 21.--Apples: Wholesale inventory, arrivals less diversions, and disappearance, Philadelphia, Pa., 1955-56 marketing season to date

Period	Total	Variety		
		Delicious	Winesap	Others
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Inventory 1/				
Sept. 16	9.2	1.5	0	7.7
Sept. 23	10.7	3.5	0	7.2
Sept. 30	8.3	3.6	0	4.7
Oct. 7	11.4	3.6	0	7.8
Oct. 14	14.6	6.7	0	7.9
Oct. 21	9.2	3.4	0	5.8
Oct. 28	19.4	10.5	0	8.9
Nov. 4	19.4	9.0	0	10.4
Nov. 10 2/	15.7	6.5	0	9.2
Nov. 18 2/	29.9	11.7	0	18.2
Nov. 25	29.4	11.4	0	18.0
Dec. 2	30.8	13.5	0	17.3
Dec. 9	26.8	11.9	0	14.9
Dec. 16	29.3	13.6	0	15.7
Dec. 23	19.5	8.5	0	11.0
Dec. 30	10.4	6.7	0	3.7
Arrivals less diversions				
Sept. 16-23	58.9	17.2	0	41.7
Sept. 23-30	52.1	16.8	0	35.3
Sept. 30-Oct. 7	55.7	18.9	0	36.8
Oct. 7-14	44.5	17.7	0	26.8
Oct. 14-21	47.4	10.7	0	36.7
Oct. 21-28	65.4	19.1	0	46.3
Oct. 28-Nov. 4	51.2	13.2	0	38.0
Nov. 4-10 2/	34.4	9.8	0	24.6
Nov. 10-18 2/	56.7	19.7	0	37.0
Nov. 18-25	34.2	12.5	0	21.7
Nov. 25-Dec. 2	32.5	10.4	0	22.1
Dec. 2-9	49.0	16.5	0	32.5
Dec. 9-16	43.8	13.9	0	29.9
Dec. 16-23	43.1	17.3	0	25.8
Dec. 23-30	27.5	8.2	1.0	18.3
Disappearance 1/				
Sept. 16-23	57.4	15.2	0	42.2
Sept. 23-30	54.4	16.7	0	37.7
Sept. 30-Oct. 7	52.6	18.9	0	33.7
Oct. 7-14	41.3	14.6	0	26.7
Oct. 14-21	52.8	14.0	0	38.8
Oct. 21-28	55.2	12.0	0	43.2
Oct. 28-Nov. 4	51.2	14.7	0	36.5
Nov. 4-10 2/	38.1	12.3	0	25.8
Nov. 10-18 2/	42.5	14.5	0	28.0
Nov. 18-25	34.7	12.8	0	21.9
Nov. 25-Dec. 2	31.1	8.3	0	22.8
Dec. 2-9	53.0	18.1	0	34.9
Dec. 9-16	41.3	12.2	0	29.1
Dec. 16-23	52.9	22.4	0	30.5
Dec. 23-30	36.6	10.0	1.0	25.6

1/ Differs from weekly reports because of change in method of handling "on-track" holdings.
2/ Because of holiday November 11, week of November 4-10 includes only 6 days and week of November 10-18 includes 8 days.

COMPARISON OF APPROACHES USED IN MEASURING CHANGES IN THE MOVEMENT OF APPLES

Retail Audit and Observation Approaches

The problem of measuring effective or changing demand for an agricultural product is difficult and complex in our present day marketing system. Knowledge concerning changes in effective demand, however, is of utmost importance to the efficient marketing of agricultural products.

A private research firm, under contract with the Department, collected data on weekly changes in the movement of apples at retail by the audit and observation approaches in the metropolitan area of Philadelphia, Pa.

Sixty retail food stores were selected for the study with a division of the sample into 2 independent samples of 30 stores each. To qualify for this study a store had to be a self-service supermarket with 2 or more check-out counters and a produce department.

A preliminary survey, using a probability sample based on latest grocery store route lists and sanborn maps, was made to establish a list of eligible stores from which the 2 samples of 30 stores could be selected, including the selection of alternates for noncooperating stores. All forms and procedures used in the study were pre-tested by trained interviewers in a number and variety of stores. Enumerators were thoroughly briefed on all phases of the collection of the data.

A determination of condition of apples is an important aspect of this work. Enumerators were trained by market inspectors of the Fresh Products Standardization and Inspection Branch, Fruit and Vegetable Division, AMS, to recognize the general characteristics of each apple variety and to determine the quality condition of the apples on display in the stores. Characteristics used in determining quality and condition ratings of good, fair, or poor were:

1. Color: The desired color of each variety was determined as to good, fair, or poor.

2. Bruising: Slight, moderate, or serious (including mechanical injury).

3. Russeting, or other blemishes: Slight, moderate, or serious russeting or blemishes so as to reduce marketability.

4. Shape: Good (uniform and well shaped), fair, or poor (constricted or deformed, seriously misshapen).

5. Decay: Little, moderate, or serious.

The consumer's choice of any particular kind of fruit is largely determined by the attractiveness of the display and the appearance and quality of the fruit displayed. The consumer's reaction to apple displays in both package and bulk has been demonstrated in earlier merchandising methods studies. 4/ There is a wide selection of apple varieties on the commercial market. The selection of a certain variety by a housewife is usually motivated by the purpose for which the apples will be used, such as eating raw or baking. To provide detailed information regarding the movement by certain varieties the retail study was designed to include a breakdown of major western and eastern varieties.

In measuring the changes in retail movement, 2 approaches, the audit and observation, are being utilized. A primary purpose of this research is to provide the trade with additional data on the change in movement of the product at the retail level in a representative eastern city. An equally important purpose is to appraise the effectiveness of different approaches in obtaining accurate data and the corresponding cost involved.

An additional breakdown of the data was made for each of 2 subsamples of 30 stores each. Total sales and sales per 100 customers during observation periods indicate some divergence in week-to-week changes. The same is true with total weekly sales obtained by the audit approach (fig. 12, tables 22 and 23). 5/

In measuring the change in movement of apples by the observation approach, enumerators are placed in the sample stores for 1 hour each week, during Thursday, Friday, or Saturday, to observe and record actual purchases of apples by variety and areas of origin (western and eastern and all other areas), and price paid per pound. The 1-hour periods of observation are divided into 2 consecutive 30-minute periods. Data are also reported to indicate the proportion of apples actually being sold in package and bulk and also the number of stores displaying either packages, bulk, or both. In addition, the enumerators record the number of customers passing apple displays, the retail prices of closely competing fruits, any change in size, location, or type of display from week to week, and weather conditions during store observation periods. Observations of consumer purchases are conducted during the last 3 days of the week as store traffic is normally heaviest during this particular period. The schedule of observations in each store remains fixed from week to week; that is, there is no fluctuation in the hours in which purchases are observed in the sample of stores. One of the advantages of the observation approach is that it causes little

4/ Smith, Hugh M. "Merchandising Studies in Supermarkets--Apples, Lettuce, and Tomatoes." U. S. Agr. Mktg. Serv., AMS-18, pp. 3 and 5, March 1955. Earlier work on packaging was done by Max E. Brunk and Bennett A. Dominick, Jr., at Cornell University, Ithaca, N. Y.

5/ Combined data are presented in figures 1 and 2; tables 2 and 3.

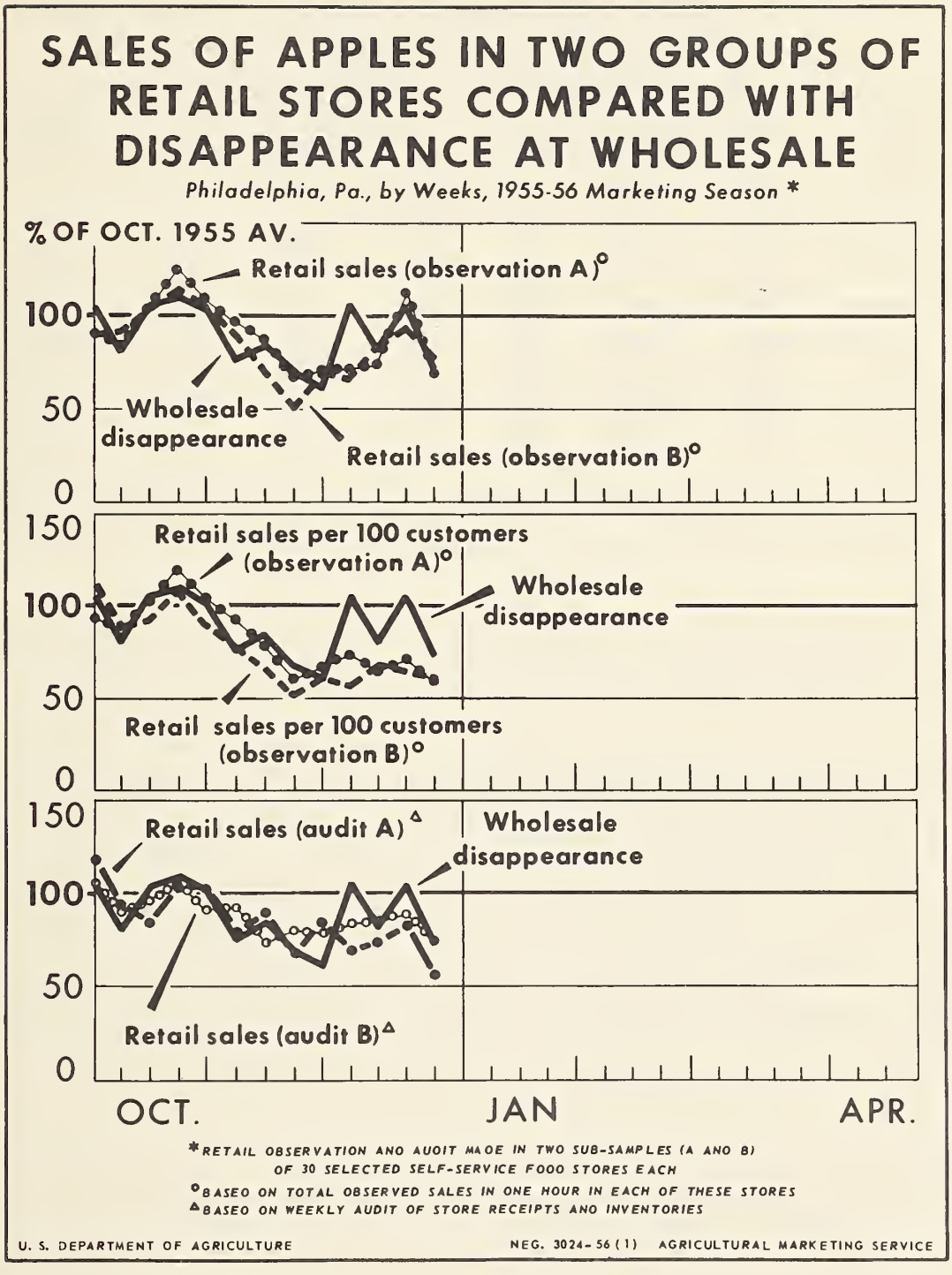
SALES OF APPLES IN TWO GROUPS OF RETAIL STORES COMPARED WITH DISAPPEARANCE AT WHOLESALE
Philadelphia, Pa., by Weeks, 1955-56 Marketing Season *
% OF OCT. 1955 AV.
Retail sales (observation A)°
100
50
Wholesale disappearance
Retail sales (observation B)°
0
150
Retail sales per 100 customers (observation A)°
100
Wholesale disappearance
50
Retail sales per 100 customers (observation B)°
0
150
Retail sales (audit A)△
Wholesale disappearance
100
50
Retail sales (audit B)△
0
OCT.
JAN
APR.
*RETAIL OBSERVATION AND AUDIT MADE IN TWO SUB-SAMPLES (A AND B) OF 30 SELECTED SELF-SERVICE FOOD STORES EACH
°BASED ON TOTAL OBSERVED SALES IN ONE HOUR IN EACH OF THESE STORES
△BASED ON WEEKLY AUDIT OF STORE RECEIPTS AND INVENTORIES
U. S. DEPARTMENT OF AGRICULTURE
NEG. 3024-56 (1) AGRICULTURAL MARKETING SERVICE

Figure 12

Table 22.--Index numbers of retail sales in 2 subsamples of 30 stores each and disappearance from wholesale in Philadelphia, Pa., by weeks, 1955 season to date 1/

(October 1955 Average = 100)

Period ending 2/	Sales in subsample A as measured by--			Sales in subsample B as measured by--			Disappearance from wholesale
	Observation, 1 hour		Audit, 1 week	Observation, 1 hour		Audit, 1 week	
	Total	Per 100 customers		Total	Per 100 customers		
Oct. 8	91.4	93.3	117.7	91.3	110.8	106.3	104.2
Oct. 15	83.4	86.6	94.2	92.1	89.5	90.1	81.8
Oct. 22	101.1	100.2	84.6	102.5	92.4	97.3	104.6
Oct. 29	124.1	119.8	103.1	114.1	106.8	106.5	109.3
Nov. 5	108.3	102.6	102.4	104.9	90.0	92.0	101.4
Nov. 12	96.8	94.3	77.9	89.7	76.6	93.7	75.4
Nov. 19	88.0	78.8	91.1	69.3	65.3	72.6	84.2
Nov. 26	66.8	60.6	66.8	50.3	50.8	80.2	68.7
Dec. 3	70.4	66.6	84.5	69.5	60.8	78.1	61.6
Dec. 10	71.5	72.8	69.9	66.5	56.3	83.6	105.0
Dec. 17	73.0	64.0	73.2	83.1	65.8	84.3	81.8
Dec. 24	113.4	70.6	82.0	94.4	63.4	89.2	104.8
Dec. 31	69.4	58.9	55.5	77.2	60.3	73.5	72.5

1/ Retail observation and audit made in 2 subsamples (A and B) of 30 selected self-service food stores each.

2/ These data are intended to reflect sales during a week ending Saturday.

or no inconvenience to store personnel. Another outstanding feature of this approach is that it provides a picture that is immediately available on the retail movement of the product.

The second approach at retail involves taking a weekly audit of sales of apples through the same sample of stores. Inventories of apples are taken in the individual stores at the same time each week during Monday, Tuesday, or Wednesday, along with records of receipts, spoilage, withdrawals, and transfers. Audit data on changes of movement are also obtained by variety, areas of origin, and weighted average price per pound. This approach covers sales for one complete week providing an accurate and complete record and has considerable value in indicating changes in the total movement of the product through the sample stores. However, one of the limiting factors to the audit approach is that the information lags somewhat behind that provided by the observation approach. A further limitation of this approach is that it requires exceedingly close cooperation with the store personnel and often imposes on their time.

An analysis of variance for the audit and observation data will be made for 3 pairs of weeks (1 each in November 1955, and January and March 1956) to provide estimates of sampling error pertaining to changes in quantities of apples sold. The analysis will be made for western and eastern and all other areas by each of 3 selected varieties, and for the total sold. A comparison of variance for 30-minute and 1-hour observation periods using total apples sold will also be made. For 1 pair of weeks in each of the remaining months a similar analysis will be made on total apples. For 1 week out of each pair of weeks an internal analysis of variance for differences between the audit and observation methods will be made in the final summary report on this study.

Table 23.--Apples: Sales in 2 subsamples of 30 retail stores each and disappearance from wholesale in Philadelphia, Pa., by weeks, 1955 season to date 1/

Period ending 2/	Sales in subsample A as measured by--			Sales in subsample B as measured by--			Disappearance from wholesale
	Observation, 1 hour		Audit, 1 week	Observation, 1 hour		Audit, 1 week	
	Total	Per 100 customers		Total	Per 100 customers		
	Pounds	Pounds	1,000 pounds	Pounds	Pounds	1,000 pounds	1,000 bushels
Oct. 8	769	39.1	75.1	800	42.1	62.2	52.6
Oct. 15	701	36.3	60.1	807	34.0	52.7	41.3
Oct. 22	850	42.0	54.0	898	35.1	56.9	52.8
Oct. 29	1,044	50.2	65.8	1,000	40.6	62.3	55.2
Nov. 5	911	43.0	65.3	919	34.2	53.8	51.2
Nov. 12	814	39.5	49.7	786	29.1	54.8	38.1
Nov. 19	740	33.0	58.1	607	24.8	42.5	42.5
Nov. 26	562	25.4	42.6	441	19.3	46.9	34.7
Dec. 3	592	27.9	53.9	609	23.1	45.7	31.1
Dec. 10	601	30.5	44.6	503	21.4	48.9	53.0
Dec. 17	614	26.8	46.7	728	25.0	49.3	41.3
Dec. 24	954	29.6	52.3	827	24.1	52.2	52.9
Dec. 31	584	24.7	35.4	676	22.9	43.0	36.6

1/ Retail observation and audit made in selected self-service food stores having 2 or more check-out counters.

2/ These data are intended to reflect sales during a week ending Saturday.

Wholesale Approach

Measurement of weekly changes of movement of apples at the wholesale level are obtained in four markets--Atlanta, Ga., Chicago, Ill., Los Angeles, Calif., and Philadelphia, Pa.

These markets were selected because they are representative of different geographical regions and reflect different marketing structures. Philadelphia and Chicago receive by rail large quantities of apples which are sold through auction; whereas Atlanta and Los Angeles receive substantial quantities by truck. There are considerable differences in the level of storage for apples normally held in the four markets.

Measurements taken at this particular level provide a comprehensive coverage of the total changes of the movement in the market, as well as indicating the level of stocks held. 6/ By utilizing the existing market

6/ Varying to the extent that other information is available to the industry, inventory and movement data may be used in a number of ways to assist in marketing the apple crop. For example, if the price in several markets, with demands of different elasticities, varies, a demand curve for each city may be computed to indicate profit maximization possibilities by shifting the fruit to markets where effective demand is greatest.

news facilities of the Department in these markets, it is possible to obtain the information at the wholesale level at a relatively low cost compared to the approaches at retail now being utilized. In the current program of reporting changes of movement at wholesale, only 3 varietal classifications have been used; however, if deemed advisable after reappraisal of the current program, a breakdown to include additional varieties could be made. Wholesale information is distributed over the National Market News leased wire system of the USDA through Fruit and Vegetable Market reports, and also is made available in weekly and periodic reports.

Information relating to inventories supplied in the weekly reports is obtained, as of Friday noon, by market news reporters in the selected cities from all apple handlers at the wholesale level. Those supplying inventory information include, primarily, wholesale receivers, chain stores, auctions, truckers, and prepackers. Inventories held by processors (canners, peelers, and bakers) are not included. New firms are added as they begin to handle apples. Holdings are reported for a metropolitan area, whether held on a private floor or warehouse, a private rail siding, or in public storage. Quantities "on track" are reported separately by the railroads, except in Atlanta where they are reported by the wholesalers to whom they are consigned. In the weekly reports, apples "on track" were included sometimes in disappearance before time of actual disappearance. This resulted from excluding "on track" holdings from the inventory. Inventory data have been revised in this report to include "on track" holdings.

Information relating to arrivals, unloads, and diversions of apples is currently being obtained in these markets and reported daily. These data are further refined by varieties for these special reports, to show the movement of Delicious, Winesap, and "all other" varieties of apples. Arrivals into the market include apple receipts by rail, truck, and boat. Diversions or outshipments from the market are subtracted. Direct deliveries to processors are not included.

Disappearance from the wholesale level is computed by adding truck and rail receipts into the market to the beginning inventory of above-mentioned wholesale distributors, and subtracting the ending inventory. All data are being broken down to show Delicious, Winesap, and "all other" varieties. Delicious variety does not include Goldens; Winesap variety does not include Staymans. Disappearance from week to week at wholesale includes not only shipments to retail outlets, but also to institutional users such as restaurants and hospitals, and to areas normally serviced by the wholesaler.

In Chicago and Philadelphia figures on rail receipts by varieties are not readily available. Therefore, the variety figure is an estimate. The estimate as to varieties is made by using auction sales in those two markets as an indicator. For example, if rail arrivals less diversions at one of these markets during a week are 30,000 bushels, the varietal

breakdown of the 30,000 bushels will be computed according to the proportion of such varieties selling at auction in that city. Although not a perfect system, it serves as a reasonably accurate guide.

Since most apples arriving by rail in Philadelphia and Chicago are Western and since most apples sold at auction are Western, the basis for this computation is considered to be the best presently available. A varietal breakdown of truck receipts is obtained directly from wholesalers receiving them.

Data are received from the markets in carlots, bushels, or boxes. Eastern carlots are converted on the basis of 650 bushels each; western 800 each. Boxes of apples vary somewhat in capacity but, in general, average about a bushel.